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GOVERNMENT OF INDIA

जल संसाधन, नदी विकास और गंगा संरक्षण मंत्रालय

Ministry of Water Resources, River Development & Ganga Rejuvenation

जल वैज्ञानिकीय आंकड़ा (अवर्गीकृत) पुस्तक

HYDROLOGICAL DATA (UNCLASSIFIED) BOOK



सूचना प्रणाली संगठन
INFORMATION SYSTEM ORGANISATION

केन्द्रीय जल आयोग
CENTRAL WATER COMMISSION

NEW DELHI
December, 2018

जल वैज्ञानिकीय आँकड़ा
(अवर्गीकृत)
पुस्तक

HYDROLOGICAL DATA
(UNCLASSIFIED)
BOOK

HYDROLOGICAL DATA DIRECTORATE
INFORMATION SYSTEM ORGANISATION
WATER PLANNING & PROJECTS WING
CENTRAL WATER COMMISSION

New Delhi
December, 2018

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अध्यक्ष
तथा पदेन सचिव, भारत सरकार
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भारत सरकार
जल संसाधन, नदी विकास
और गंगा संरक्षण मंत्रालय,
केन्द्रीय जल आयोग
Government of India
Ministry of Water Resources,
River Development and
Ganga Rejuvenation,
Central Water Commission

FOREWORD



The planning and design of water resources projects require time series data on hydrological aspects. The basic hydrological data on gauge, discharge, silt, sedimentation and water quality are regularly collected at hydrological observation stations of CWC and processed. Thereafter the authenticated data is transmitted to the CWC regional field offices which document it in the form of Water Year Book, Sediment Year Book and Water Quality Year Book.

In an endeavour to provide suitable statistics for informed decision making in respect of hydrological data (unclassified rivers), I am happy to note that the current publication has improved substantially by including additional aspects like quality charts showing variation across river sites, river flow line diagram of various river basins etc.

The contribution of Shri Ravi Shankar, Chief Engineer (Planning & Development) as the Chairman of the Committee for improvement of this publication, Shri D.C.Sharma, Ex-Advisor (ISO) as Member Secretary of the Committee and Ms. Jiju Kurian, Advisor (ISO) is highly appreciable. The assistance provided by Shri Pankaj Sharma, Director and Dr. Niyati Joshi, Joint Director and their team is appreciated.

I hope this publication would be useful for research scholars, planners, policy makers and various stake holders at large. Any suggestion and feedback for further improvement in content and quality of this publication would be welcome.

New Delhi
December 26, 2018

(S. Masood Husain)
Chairman, CWC



S.K. Haldar
Member (WP&P)



भारत सरकार
जल संसाधन, नदी विकास
और गंगा संरक्षण मंत्रालय,
केन्द्रीय जल आयोग
Government of India
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Ganga Rejuvenation)
Central Water Commission

PREFACE

Water Resources planning requires time series data on hydrological aspects. The Hydrological Observation Divisions of CWC collect and process the basic hydrological data on gauge, discharge, silt, sedimentation and water quality on a regular basis for onward transmission to the CWC regional field officers, who document it in the form of Water Year Book, Sediment Year Book and Water Quality Year Books. Hydrological Data (Unclassified) Book is a compendium of important information of all basins pertains to Region-III consolidated at the national level.

The publication presents salient features of all basins of Region-III relating to location, drainage area, soil characteristics, type of industries, principal minerals, rainfall, temperature, type of climate, average annual run off, seasonal water flow, historical water levels, live storage capacity, annual flow of water into river basin, dependable flow of water in different river basins, ten daily & monthly sediment load for different river basins, critical absolute values of water quality parameter, land use statistics etc.

The present issue of the data book provides updated basin/site-wise data of river basins (Region-III) covering aspects such as location, drainage area, temperature, average runoff, seasonal water flow, historical water levels, average sediment load, water quality parameters and land use statistics.

The publication is intended to provide documentation of available data in the form required by the researchers and analyst.

I hope this publication will be useful for all interested in the subject. Suggestions, if any, will be highly appreciated for improvement of the publication.

New Delhi
December 12, 2018

12/12/2018

(S.K. Haldar)
Member (WP&P), CWC

The Composition of the committee for improvement of the Publication:

- Chief Engineer, P&D,CWC-----Chairperson
- Chief Engineer, EMO,CWC-----Member
- Member (SAM), CGWB-----Member
- Director, RD, CWC-----Member
- Advisor, ISO,CWC----- Member Secretary

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Executive Summary

The nation can be divided into following three regions; (a) Region-I: Indus basin & other rivers and their tributaries discharging into Pakistan; (b) Region-II: Ganga-Brahmaputra-Meghna basin & other rivers and their tributaries discharging into Bangladesh/Myanmar; and (c) Region-III: Remaining other rivers and their tributaries.

The data of Region-I and II are classified, whereas the data of Region-III is unclassified. The reservoir water level, live storage position, water quality, groundwater and meteorological data for all regions are also unclassified.

The Chapter on Introduction describes the scope of this publication and gives a complete list of region - III basins. It also gives briefly an assessment of water resources and an account of per capita availability of water.

The chapter on Overview of the river basins (Region – III) covers 16 basins. It describes salient features of each basin like geographical location, topology, topography, major tributaries, soil characteristics, availability of minerals, major industries, urban centers and important irrigation projects. Further, it gives an account of average annual flow, estimated utilizable flow and total storage capacity in different river basins.

It also covers drainage area, hydrological observation sites and peak water level in different basins. Annual dependable flow of water at terminal sites of all river basins covered in the publication has been described for the last ten years.

Water quality statistics has been presented as per IS 2296-1992. The tolerance limits of parameters of all tolerance factors of water have been indicated in respect of five classes that have been put to various uses of water. The five classes are as follows: Class A - Drinking water source without conventional treatment but after disinfection, Class B - Outdoor bathing, Class C - Drinking water source with conventional treatment followed by disinfection, Class D - Fish culture and wild life propagation, Class E - Irrigation, industrial cooling or controlled wastes or controlled waste disposal. Season-wise and site-wise detailed information on critical absolute values that decides the range of tolerance limits of water quality for Class A has been presented. Also, site-wise information of maximum and minimum values of water quality parameters during the year 2014-2015 and temporal trends of water quality parameters have been presented for pH, Biological Oxygen Demand, Dissolved Oxygen and Total Hardness.

Land use statistics have been presented in the form of land utilization pattern of the river basins (Region - III), gross and net area irrigated by sources and by river basins.

The Appendix contains the tables on Storage capacity by river basin, Salient features of different river basins, Number of hydrological observation sites by basin (Region - III), Important historical observation by sites and river basin, Flow of water by season, site and river basin, Maximum and minimum observed water levels and discharges by site and river basin, Annual dependable flow of water by site and river basin, Monthly average flow per unit drainage area by site and river basin, Time series of Sediment load by site in river basin, Ten-daily and monthly average sediment load by site and river basin, Tolerance limits of selected water quality parameters for inland surface water by its use, Critical absolute values of water quality parameters crossing tolerance limits by season, Maximum and minimum values of water quality parameters by site and river basin, Land utilization pattern by river basin and State, Area irrigated (source wise) in each district of state by river basin and basic parameters of Ground water resource availability, utilization and stage of development .

Chapter 1

Introduction

1.0 Background

1.0.1 Information System Organisation (ISO) of Water Planning & Projects Wing (WP&P) in CWC is a statistical unit of CWC entrusted in compiling data collected by CWC field offices and bringing out publications for backing up data for planning and policy formulation and researchers relating to water resources. Among these publications, the present one is on hydrological data entitled “Hydrological Data (Unclassified) Book”.

1.0.2 River management is one of the key issues for political and economic affairs of the country. Planners and policy makers require a comprehensive and reliable time series data on hydrological aspects. The primary objective of this data book is to provide data that will help in designing and execution of water resource projects in the country.

1.0.3 From the point of view of data dissemination, the nation can be divided into following three regions; (a) Region-I: Indus basin & other rivers and their tributaries discharging into Pakistan; (b) Region-II: Ganga-Brahmaputra-Meghna basin & other rivers and their tributaries discharging into Bangladesh/Myanmar; and (c) Region-III: Remaining other rivers and their tributaries.

The data of Region-I and II are classified, whereas the data of Region-III is unclassified. The reservoir water level, live storage position, water quality, groundwater and meteorological data for all regions are also unclassified. The scope of this publication is limited to data (unclassified) pertaining to the region-III basins only. The river basins (Region – III) for the purpose of this publication are listed below.

1. Mahanadi
2. Subernarekha
3. Brahmani and Baitarani
4. Godavari
5. Krishna
6. Cauvery
7. Pennar
8. East flowing rivers between Mahanadi to Pennar
9. East flowing rivers between Pennar to Kanyakumari
10. Narmada
11. Tapi
12. West flowing rivers from Tapi to Tadri
13. West flowing rivers from Tadri to Kanyakumari
14. Mahi
15. Sabarmati
16. West flowing rivers of Kutch, Saurashtra including Luni

The descriptions of these river basins (Region-III) are given in Chapter 2.

1.0.4 The nation-wide data collection network of CWC is spread over 1131 hydrological observation (H.O) stations (878 H.O station opened upto XII Plan and 253 out of 800 new H.O Station opened during XII Plan) covering both classified and un-classified river basins (as on 31.03.2016). Out of these, 417 operational sites are located in region-III basins. The distribution of the sites by river basin (Region-III) has been presented in Table 3 for the year 2014-15. In these sites, hydrological data on gauge, discharge, silt, sedimentation, water quality and water flow are collected regularly.

1.0.5 Based on the data collected in the field, three water year books for gauge and discharge, sediment and water quality are prepared by CWC field office at divisional level. All these books along with some relevant land use statistics collected by the Ministry of Agriculture & Farmers Welfare are integrated in this data book.

1.1 Assessment of Water Resources

1.1.1 The annual precipitation including snowfall is the main source of water in India and the average is estimated to be of the order of 4000 cu km. The total water resource potential of the country, which occurs as natural run off in the rivers is estimated at 1869 cu km considering both surface and groundwater into account. Due to various constraints of topography, uneven distribution of resource over space and time, it has been estimated that only about 1123 cu km can be put to beneficial use – out of which only 690 cu km is surface water. However, 370 cu km of estimated utilizable surface water comes from the region-III river basins.

1.2 Per Capita Availability of Water

1.2.1 As per the distribution of water resources potential in the country, the national per capita annual availability of water is 1545 cu m (estimated as on 1st March 2011). The estimated per capita average availability during the year 2010 in Brahmaputra system was 13407 cu m while it was as low as 263 cu m in Sabarmati basin. The per capita availability in the country was 1608 cu m during 2010. Any situation of availability of less than 1000 cu m per capita is considered by international agencies as scarcity conditions. Krishna, Cauvery, Subernarekha, Pennar, Mahi, Sabarmati, Tapi, East Flowing Rivers and West Flowing Rivers of Kutch and Saurashtra including Luni are some of the basins, which fall into this category- out of which Cauvery, Pennar, Sabarmati and East Flowing rivers and West Flowing Rivers of Kutch and Saurashtra including Luni facing more acute water scarcity with per capita availability of water less than or around 500 cu m.

This book contains data for 2014-15. Wherever time series data are presented, it covers a period of ten years from 2005-06 to 2014-15.

Chapter 2

Overview of the River Basins (Region-III)

This chapter gives a detailed account of all river basins pertaining to Region-III only. It may be mentioned that Indus basin & other rivers and their tributaries discharging into Pakistan pertain to Region-I; Ganga-Brahmaputra-Meghna basin & other rivers and their tributaries discharging into Bangladesh/Myanmar pertain to Region-II. Remaining other rivers and their tributaries pertain to Region-III.

- It covers salient features like geographical location, topology, topography, major tributaries, soil characteristics, availability of minerals, major industries, urban centres and important irrigation projects including observation sites. Basin-wise detailed information is presented in Table 2 of Appendix.
- It provides the flow line diagram of the basin which gives a fair idea about the major projects, hydrological observation sites and tributaries of the main river.
- It depicts the annual dependable flow (10%, 25%, 50%, 75%, 90%, 100%) at terminal sites of the basin. Basin-wise detailed information is presented in Table 7 of Appendix.
- It gives the season-wise (monsoon, winter, summer) temporal trends of water quality parameters viz. pH, BOD (Biological Oxygen Demand), DO (Dissolved Oxygen) and Total Hardness at selected sites of the basins. Basin-wise detailed information is presented in Table 13 of Appendix.
- It provides information on land use statistics viz. land utilisation pattern (forest, fallow land, cropped area etc.), Gross and Net area irrigated of the basin. Basin-wise detailed information is presented in Table 14, Table 15 and Table 16 of Appendix.

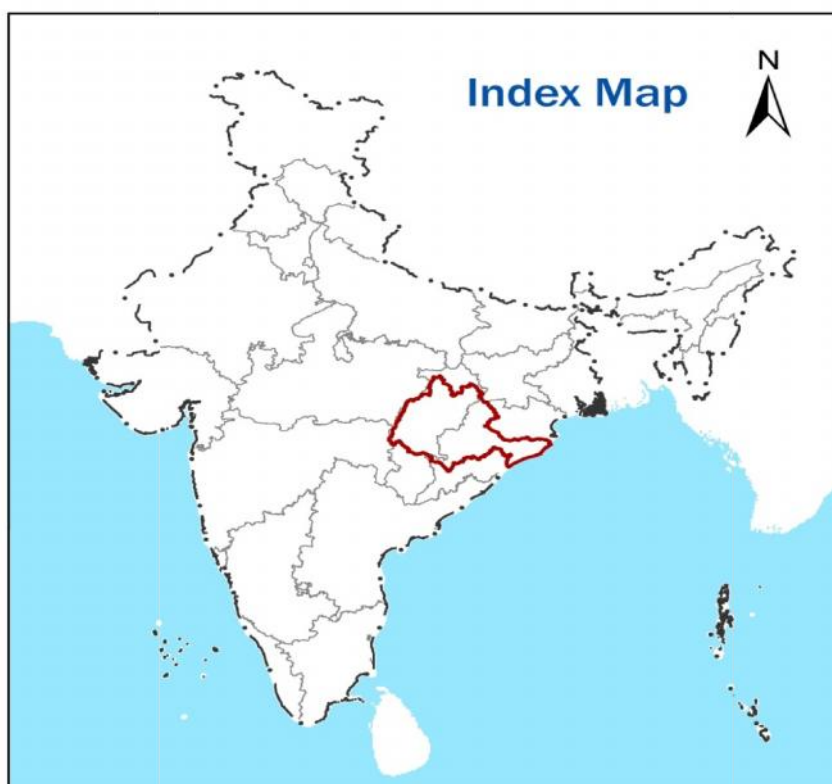
2.1 MAHANADI BASIN

Location: The basin is physically bounded in the north by Central India hills, in the south and east by the Eastern Ghats and in the west by Maikala hill range. The Chiroli Hills form the watershed dividing the Wainganga valley from the Mahanadi Basin, the upper portion of which is designed as the Chhattisgarh Basin. The Mahanadi basin lies encompassed within geographical co-ordinates of $80^{\circ}28'$ to $86^{\circ}43'$ east longitudes and $19^{\circ}8'$ to $23^{\circ}32'$ of north latitudes running a total length of about 851 km. The total catchment area of the basin is 141589 sq km which is nearly 4.3% of the total geographical area of the country. The basin extends over Chhattisgarh and Odisha and comparatively smaller portions of Madhya Pradesh, Jharkhand and Maharashtra.

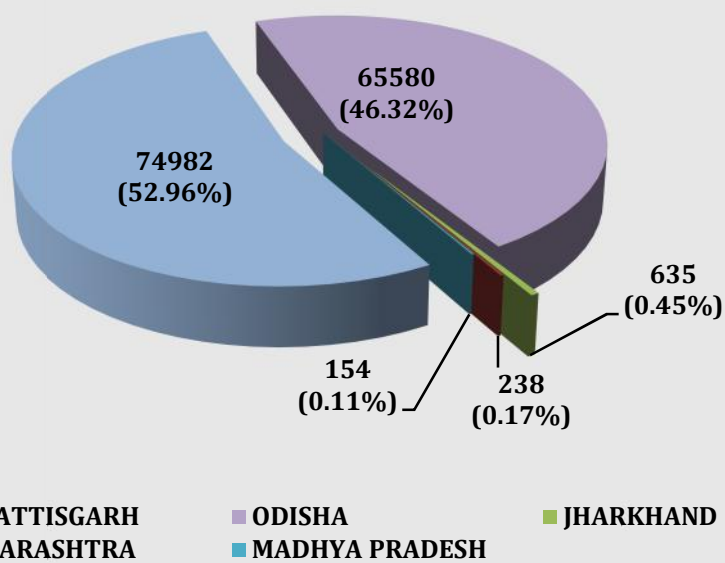
The river Mahanadi is one of the major inter-state east flowing rivers in peninsular India. It originates at an elevation of about 442 metre above Mean Sea Level (msl) near Farsiya village near Nagri town in Dhamtari district of Chhattisgarh. The total length of the river from its origin to confluence at the Bay of Bengal is about 851 km, of which 357 km is in Chhattisgarh and the balance 494 km in Odisha. During its traverse, a number of tributaries join the river on both the banks. There are 14 major tributaries of which 12 are joining upstream of Hirakud reservoir and 2 downstream of it.

On the left bank six tributaries namely the Seonath, the Hasdeo, the Mand, the Ib, the Kelo and Borai drain into main channel upstream of Hirakud reservoir. On the Right Bank six tributaries namely the Pairi, the Jonk, the Sukha, Kanji, the Lilar and the Lath join upstream of Hirakud reservoir and two tributaries namely Tel and Ong join downstream of it. The three major tributaries namely the Seonath and the Ib on the Left Bank and the Tel on the Right Bank together constitute nearly 46.63% of the total catchment area of the river Mahanadi. The Seonath, which is the largest tributary of Mahanadi, rises from an elevation of 533 metre in village Kotgai, District Durg (Chhattisgarh) and drains three districts of Chhattisgarh namely Durg, Rajnandgaon and Bilaspur. The Tel, which is the second largest tributary of Mahanadi River, rises from an elevation of 700 metre in village Jorigam of Nabarangpur district of Odisha and drains five districts of Odisha namely Nabarangpur, Kalahandi, Bolangir, Boudh and Kandhamal. The Ib, which is the third largest tributary of Mahanadi, rises from an elevation of 762 metre in village Pandrapat, District Raigarh (Chhattisgarh) and drains Raigarh and Jashpur districts of Chhattisgarh, along with two districts of Odisha, namely Sundergarh and Sambalpur. The monsoon is the principal rainy season, when over 75% of the annual rainfall is received over a major portion of the basin with July/August as the rainiest month. The average annual rainfall of the basin is of the order of 1400 mm.

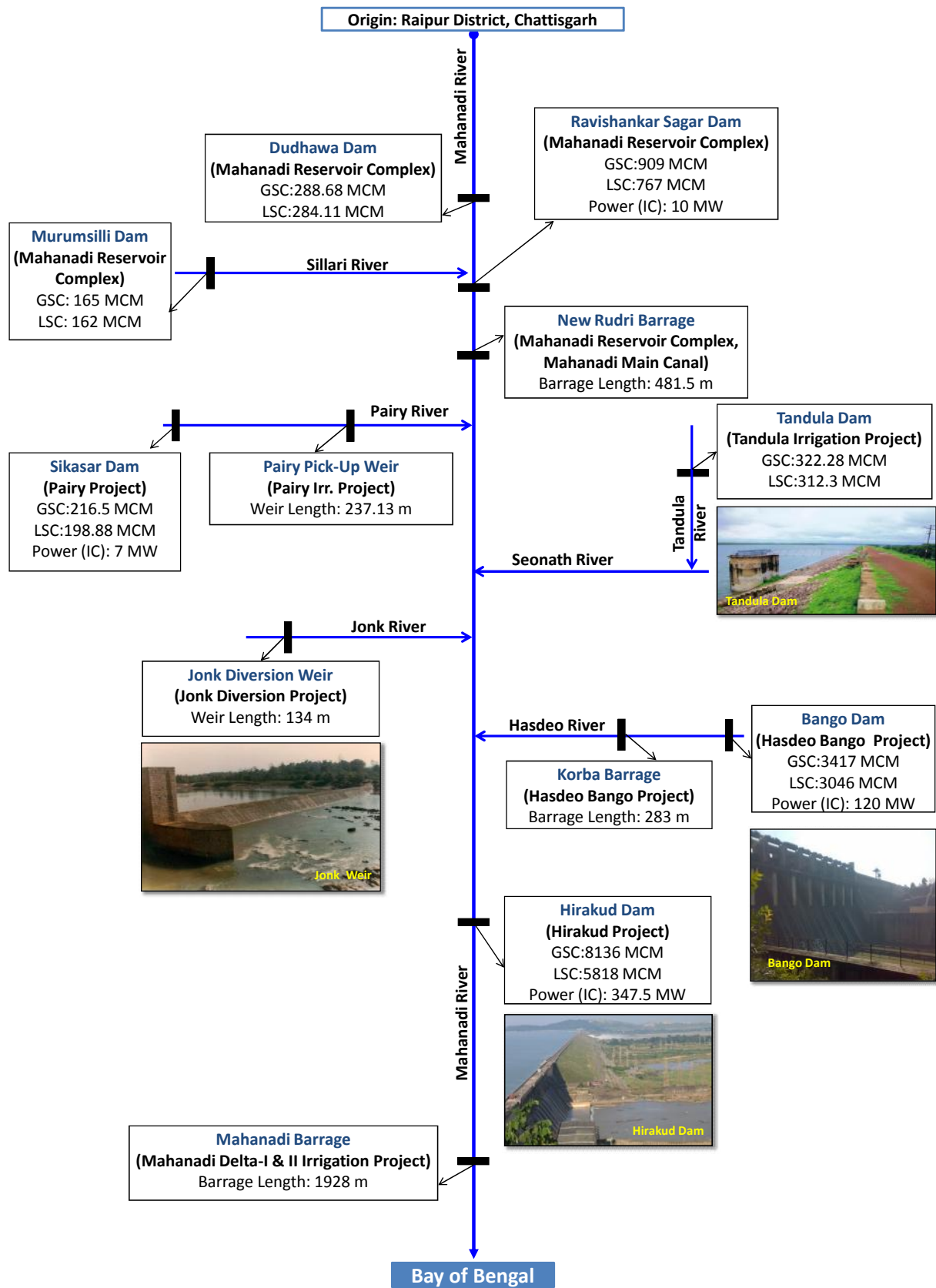




State Wise Mahanadi Basin Area (Sq. km)



Mahanadi River Flow Line Diagram



2.1.1 Irrigation Projects: The Major Projects namely Tandula, Mahanadi main Canal, Hirakud Dam, Barrage, Kharang Tank, Manairi Tank, Hasdeo Bango Dam, Tairi, Kodar, Salaki, Ong Diversion and Sunder Dam fall in the catchment areas of the river basin.

2.1.2 Hydrological Observation Sites: The Central as well as the State Governments carry out periodic measurements of hydrological observations. The CWC maintains 54 sites in the basin out of which Gauge in 48 sites and Discharge in 22 sites are made. In 18 stations, sediment observations are also carried out (as per 2014-15 data).

2.1.3 Peak Water Level: There are 20 sites in the basin for which historical observations are given. The reference period varies site to site starting from 1972 to 2015. The maximum drainage area 1,24,450 sq km is covered by Tikrapara site in the basin while Mahendragarh site covers minimum drainage area i.e. 1,100 sq km. The maximum stage of peak water i.e. 420.44 metre is observed at Mahendragarh site on 12.07.1990. On the other hand, Tikrapara site has registered minimum peak water level i.e. 74.57 metre on 10.09.2011.

2.1.4 Water Quality Statistics: As per IS 2296-1992, the tolerance limits of parameters of all polluting factors of water in have been indicated in the Tables-11 in respect of the following five classes that have been formed according to various uses of water.

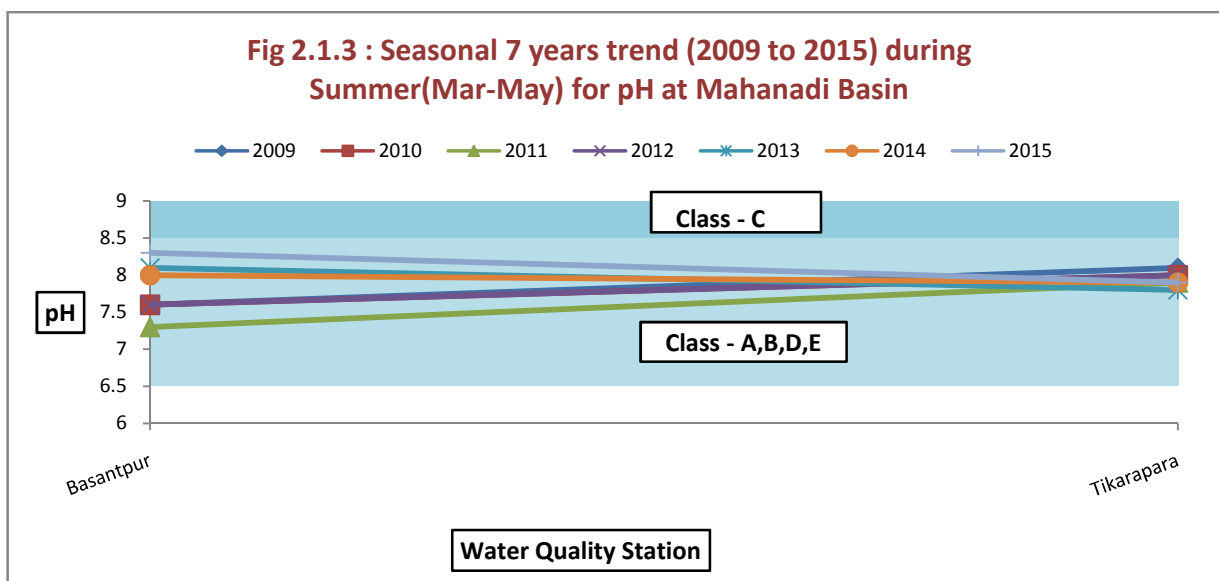
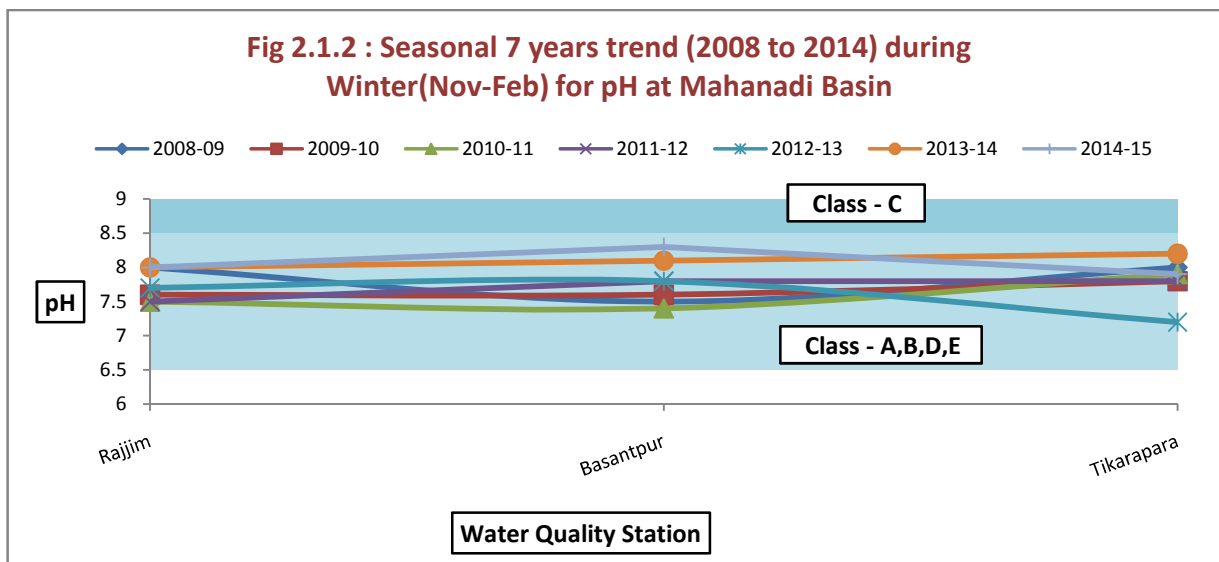
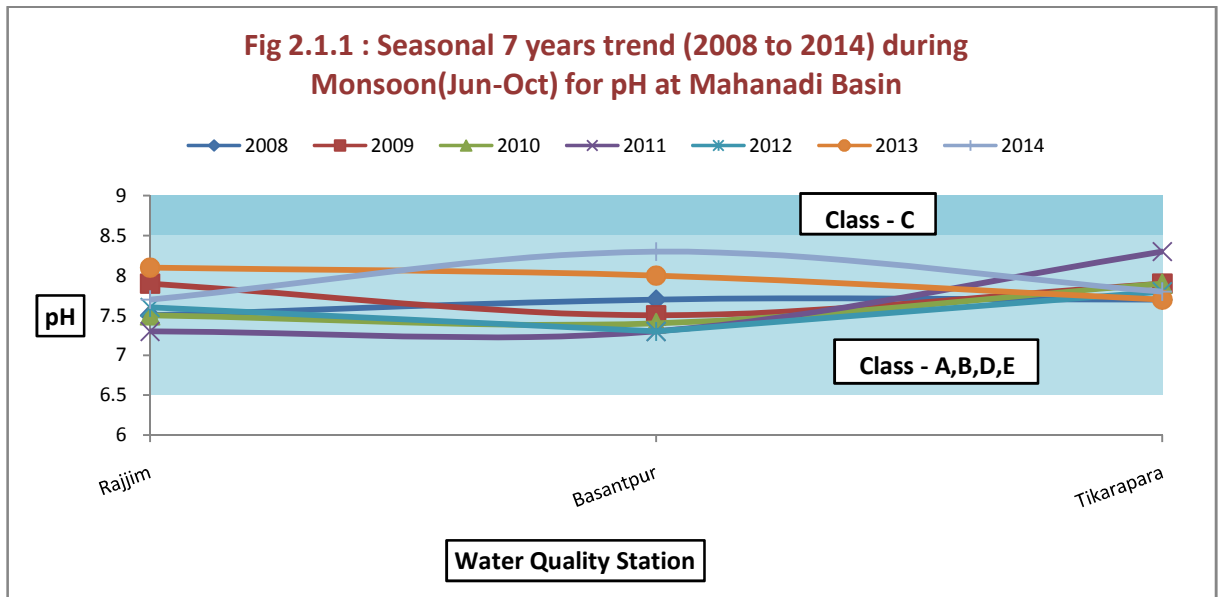
Class A:	Drinking water source without conventional treatment but after disinfection
Class B:	Outdoor bathing
Class C:	Drinking water source with conventional treatment followed by disinfection
Class D:	Fish culture and wild life propagation
Class E:	Irrigation, industrial cooling or controlled wastes or controlled waste disposal.

Considering importance of water quality, an attempt has been made to present seasonwise and site-wise detailed information on critical absolute values that are outside the range of the tolerance limits of water-quality for class-A. These values of water quality parameters have been presented in Table 12.

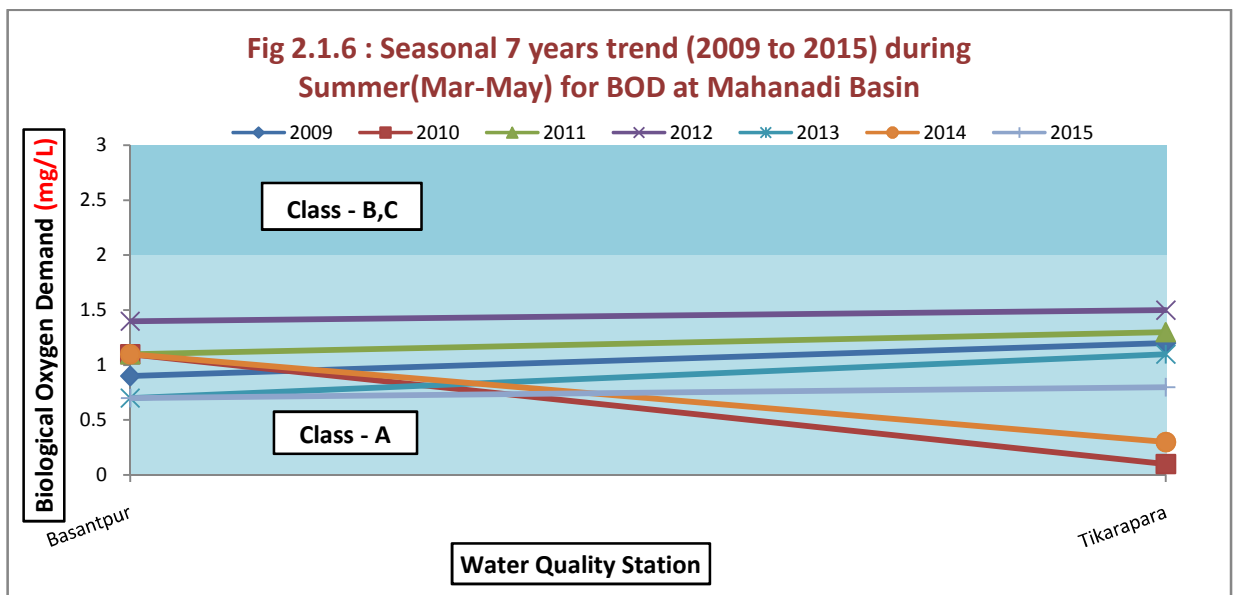
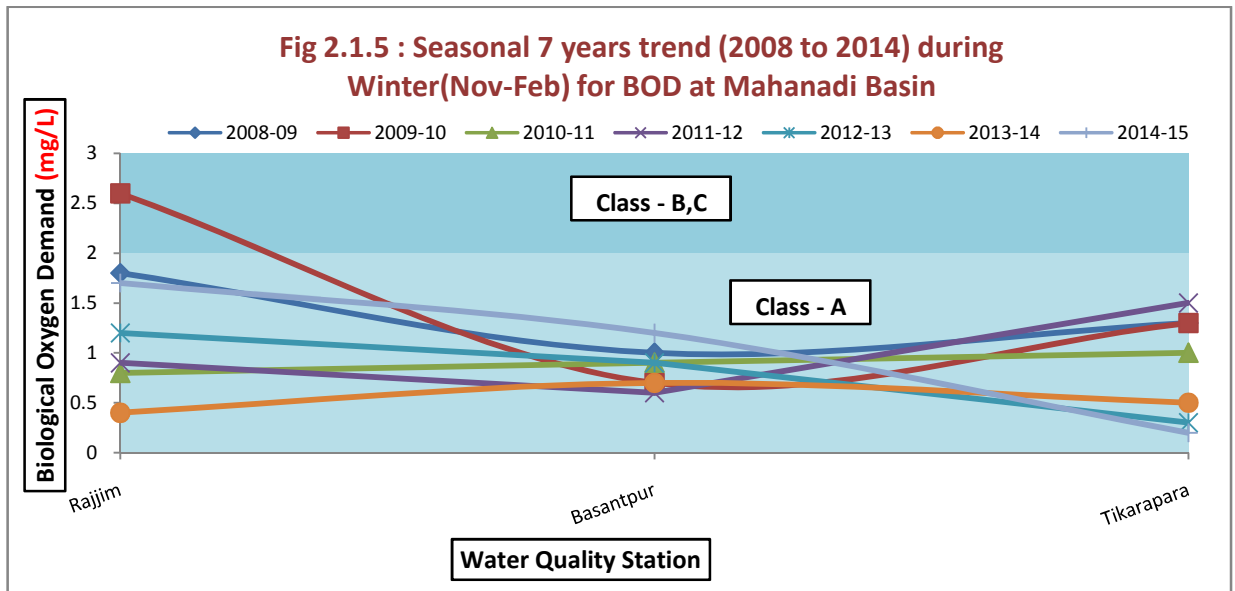
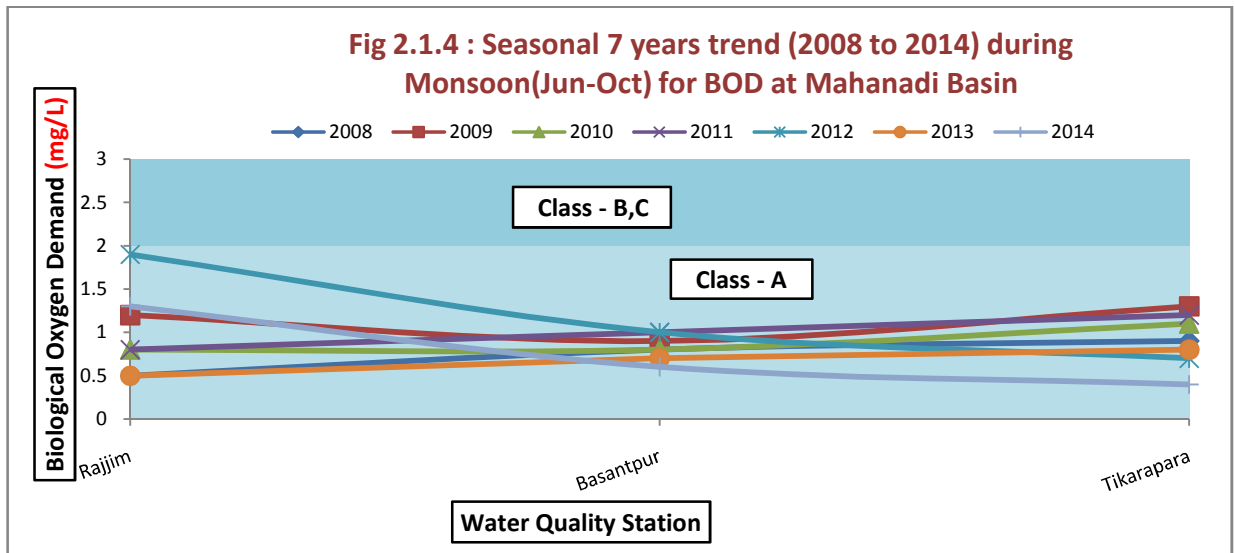
Site-wise information on maximum and minimum values of water quality parameters during the year 2014-15 for reviewing the kind of water being discharged/ supplied for different purposes have been presented in Table 13.

Temporal trends of water quality parameters for the Mahanadi river basin are given below.

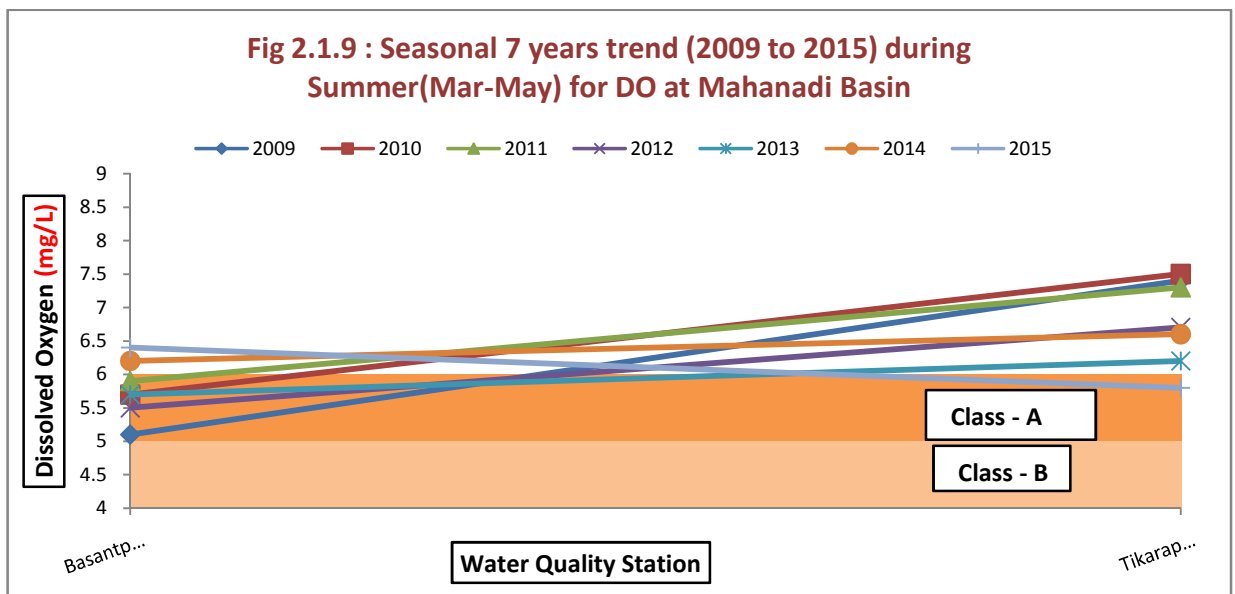
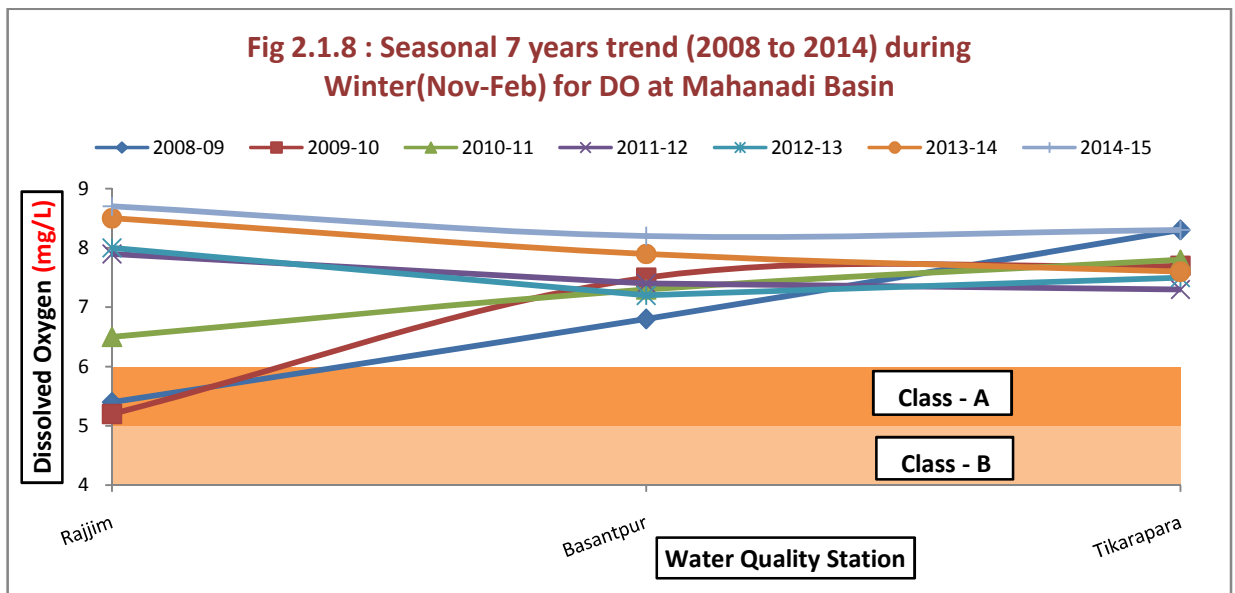
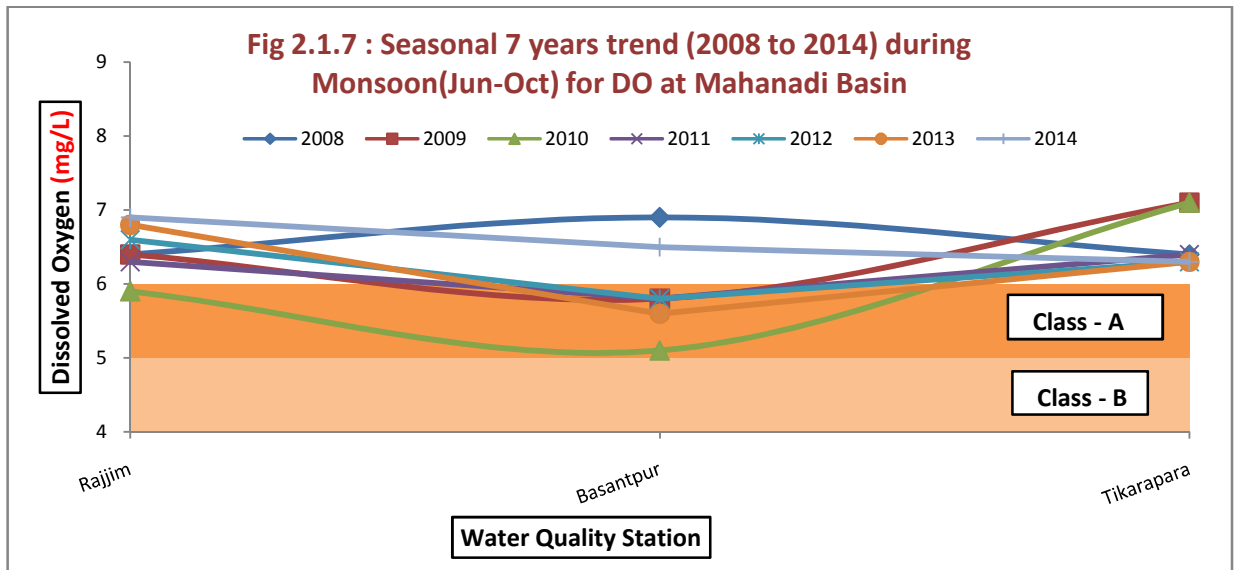
Basin: Mahanadi (Water Quality Parameter : pH)



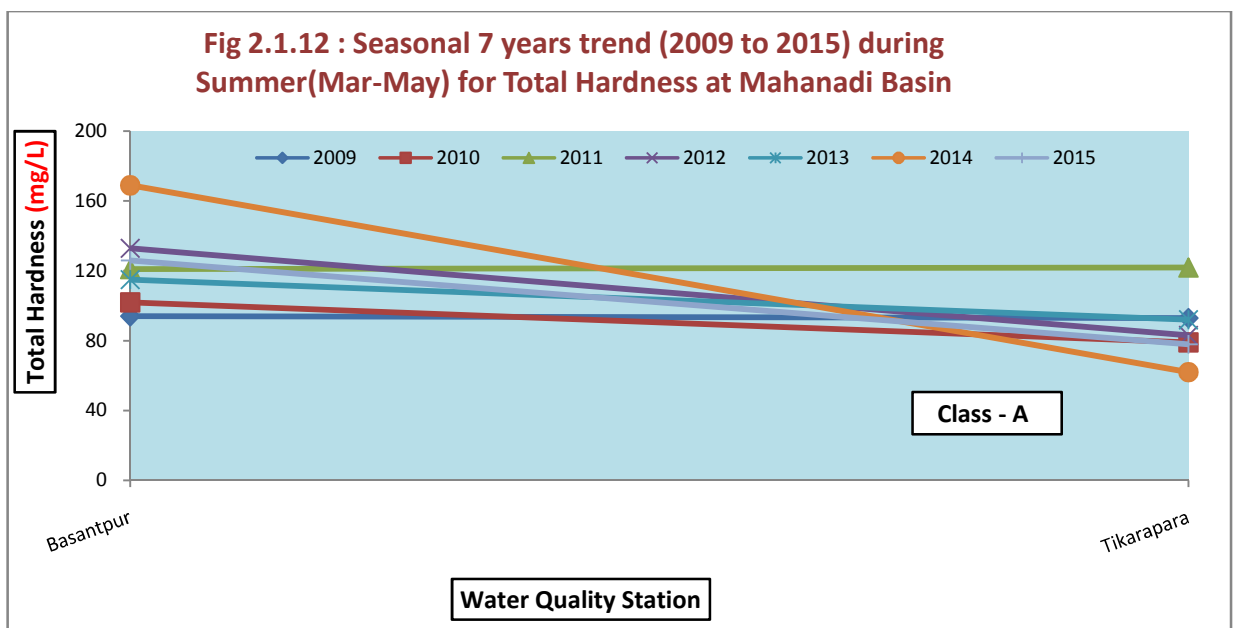
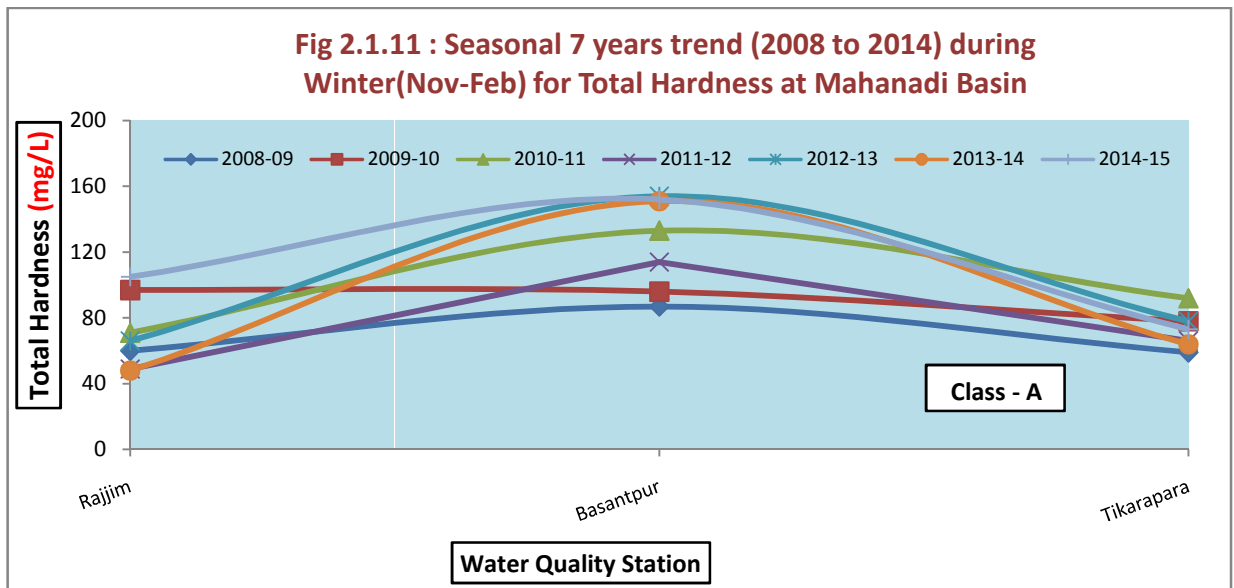
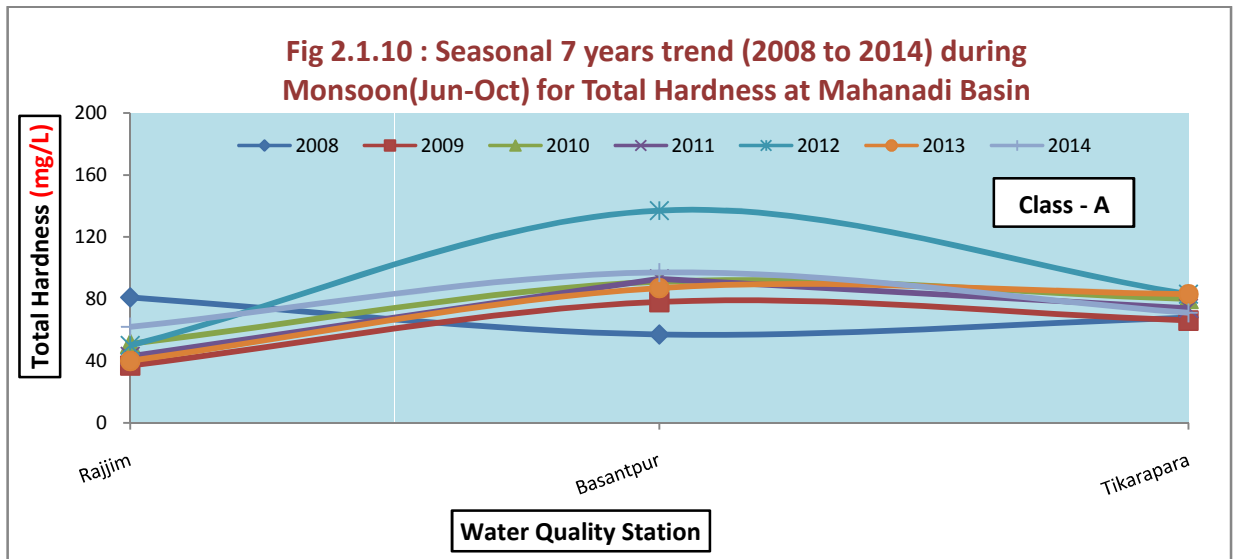
Basin: Mahanadi (Water Quality Parameter : Biological Oxygen Demand)



Basin: Mahanadi (Water Quality Parameter : Dissolved Oxygen)



Basin: Mahanadi (Water Quality Parameter : Total Hardness)

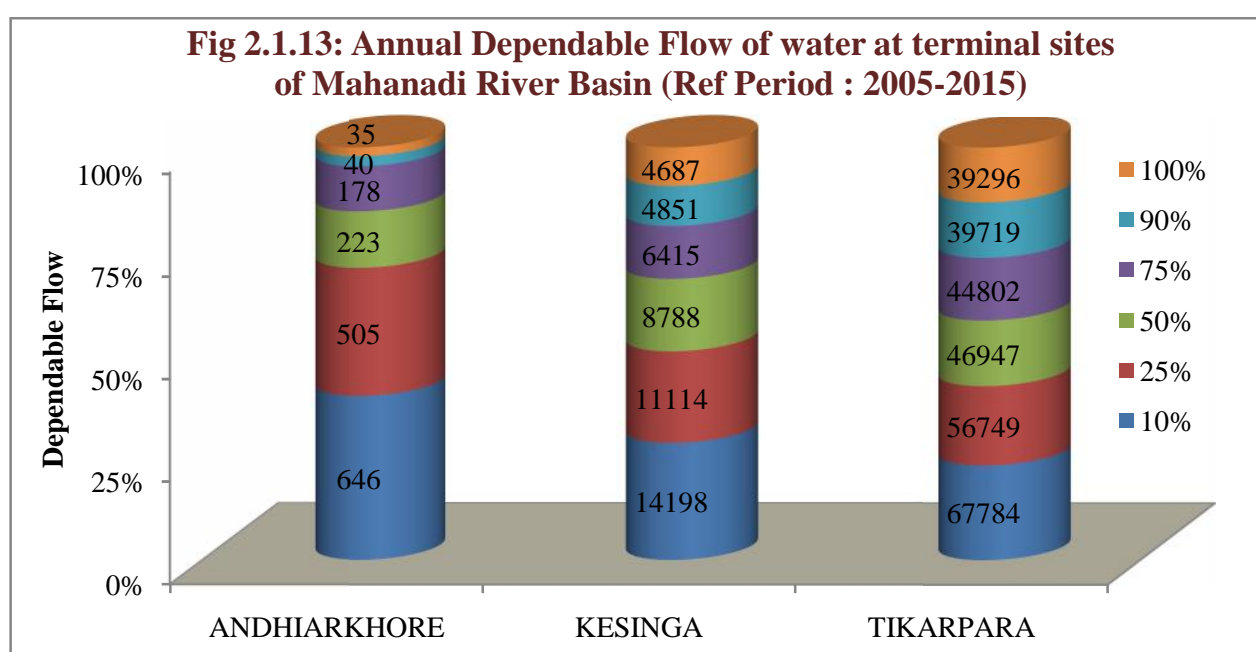


2.1.5 Availability of required amount of water is of paramount importance for any plan or project in water sector for irrigation etc. With this view Table 7 has been presented. It provides dependable flow of water at 10 equal percentile levels for each site. The percentiles have been calculated taking into consideration the last 10 years period (2005 to 2015) of releases of water from the sites. The following pages will graphically reveal the annual dependable flow (10%, 25%, 50%, 75%, 90%, 100%) for the three terminal sites of Non-classified river basins.

Table 2.1.1: Annual Dependable Flow Of Water at Terminal Sites Of Mahanadi Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	ANDHIARKHORE	6/2005 to 5/2015	646.30	504.80	222.72	177.69	39.72	34.50
2	KESINGA		14198.29	11114.42	8788.32	6414.94	4851.35	4687.01
3	TIKARPARA		67784.13	56748.93	46947.24	44801.64	39718.71	39295.59

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar



2.1.6 Land Use Statistics: Land use pattern is a fairly useful indicator in understanding the environmental set up, infrastructural facilities and climatic conditions of an area. The land use pattern is an outcome of the interaction and interplay of the various physical conditions of the area. It gives not only the land coverage but also an insight into the nature of environmental degradation in the catchment area of the basins. Hence it is considered very important in the environmental study of any area. Various Government Departments for their respective administrative units such as Blocks/Tehsils/Districts mostly compile the information. But information is not available for districts/areas under different basins. In this issue land use statistics have confined to analysis of information at state and basin-wise. The basin wise land utilisation has been computed as sum total of land use for different classifications in the area of district in a particular state falling within a basin. The data on district and state-wise land use pattern as published by the Directorate of Economics and Statistics, Department of Agriculture & Co-operation, Ministry of Agriculture has been used for the purpose. The data has been classified into (i) forest area (ii) area not available for cultivation (iii) other uncultivated lands excluding fallow land (iv) fallow land (v) net area sown (vi) area sown more than once and (vii) total cropped area.

The land utilisation pattern by district of each basin is presented in Table 14 for the river basins (Region-III). These basins cover approximately 1138 thousand sq. kilometers area of the states as reported land utilized area.

The land use classification reported during 2014-15 as per Ministry of Agriculture for the State is adopted for the catchment area of seventeen river basins (Region-III). The district-wise area under catchment of the basin is reported by India-WRIS and land use under forest coverage, not available for cultivation, other uncultivated land, fallow land and net area shown under the river basin have been indicated under land use statistics. Gross Area Irrigated and net area irrigated within the river basins by source such as canals, tanks, wells and other sources are presented in table 15. The Table 2.1.2 to Table 2.1.4 given below present an overall picture of the basins combined land use pattern, gross and net area irrigated by different sources like Canals, Tanks, Wells, etc.

TABLE 2.1.2: LAND UTILISATION PATTERN OF MAHANADI AND ALL RIVER BASIN (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Mahanadi	124904.14	45577.10	14652.88	11248.22	9493.25	43932.69	9634.57	53567.26
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.1.3: GROSS AREA IRRIGATED BY SOURCES OF MAHANDI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
Mahanadi	12077.24	954.59	13031.83	387.56	4287.56	161.77	4449.33	339.22
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.1.4: NET AREA IRRIGATED BY SOURCES OF MAHANADI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
Mahanadi	5607.48	0.00	5607.48	241.29	2450.97	100.12	2551.09	6138.00
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.1.7 Urban Centres: Three important urban centres in the basin are Raipur, Durg and Cuttack.

2.1.8 Industries: Mahanadi, because of its rich mineral reserve and adequate power resource, has a favorable industrial climate. The important industries presently existing in the basin are iron and steel plant, aluminum factories, paper mill, sand and cement industries.

2.1.9 Minerals: The important minerals found in the basin are Iron Ores, Coal, Lime stone, Quartzite, Copper Ores, Silver, Lead, Mica, Bauxite, Galena and Graphite.

2.2 SUBERNAREKHA BASIN

Location: The Subernarekha is one of the longest east flowing inter-state rivers. It covers large areas of Jharkhand and some parts of Odisha and West Bengal. The basin lies between north latitudes of $21^{\circ}15'$ to $23^{\circ}34'$ and east longitudes of $85^{\circ}8'$ to $87^{\circ}32'$ situated in the northeast corner of the peninsular India. It is bounded on the north-west by the Chhotanagpur Plateau, on the south by Baitarani basin and in the south-east by the Bay of Bengal. This river originates near Nagri village in Ranchi district of Jharkhand at an elevation of 600 metre. The total length of the river is about 395 km. Its tributaries are Kanchi, Kharkai, Karkari, Raru, Garru and Dulang. The basin is generally influenced by South-West monsoon, which begins in the month of June and extends upto October.

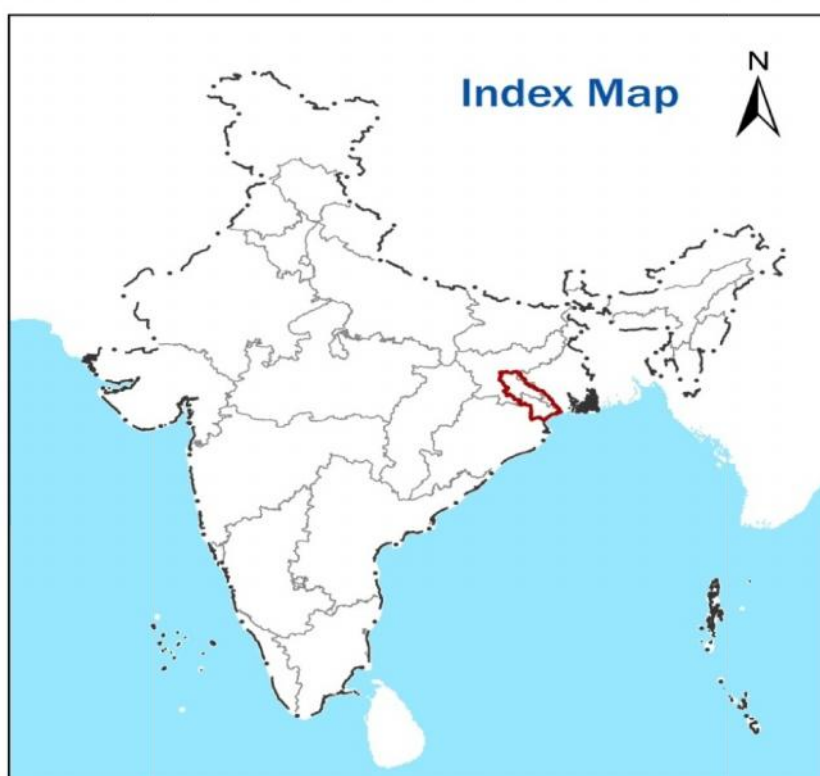
2.2.1 Irrigation Projects: Kanchi irrigation schemes (major), Sunei irrigation project (major), Khadkhi Irrigation Project (medium) are the prominent projects in the basin.

2.2.2 Hydrological Observation (H.O.) Sites: There are 12 H.O. sites out of which at 4 sites (at Ghatsila, Govindpur, Jamshedpur and Adityapur) the data on gauge, discharge, sediment and water quality observations are collected. In one site, at Muri, data collected pertains to observations on gauge, discharge and water quality. At site Fekoghat and Jamsholaghat, data are collected for gauge, discharge. Besides these sites, there are five sites where only Gauge related data are collected (as per 2014-15 data).

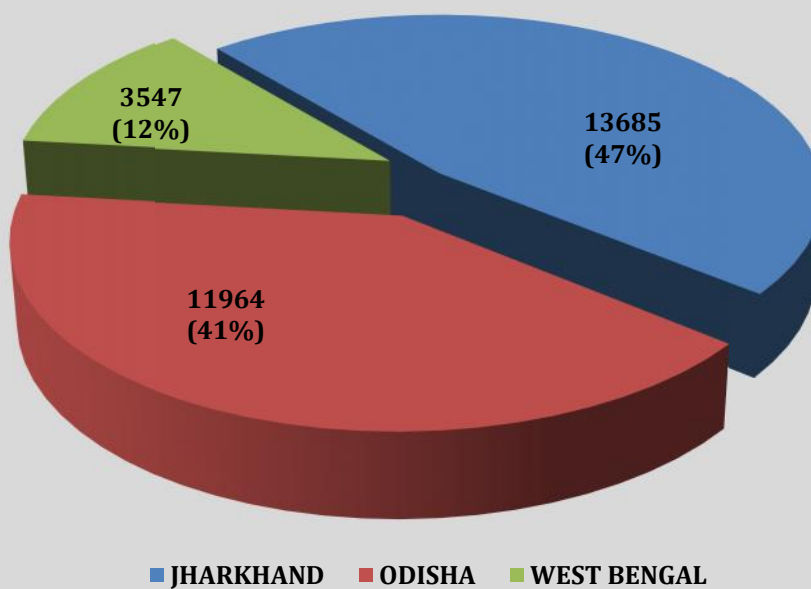
2.2.3 Peak Water Level: This basin contains the information in respect of 7 sites and there is a vast variation in peak water level which varies from 237.50 metre to 8.90 metre during the reference period 2014-15 (See Table 4).

2.2.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for three sites of Subernarekha basin (Fig 2.2.1 to Fig 2.2.12).

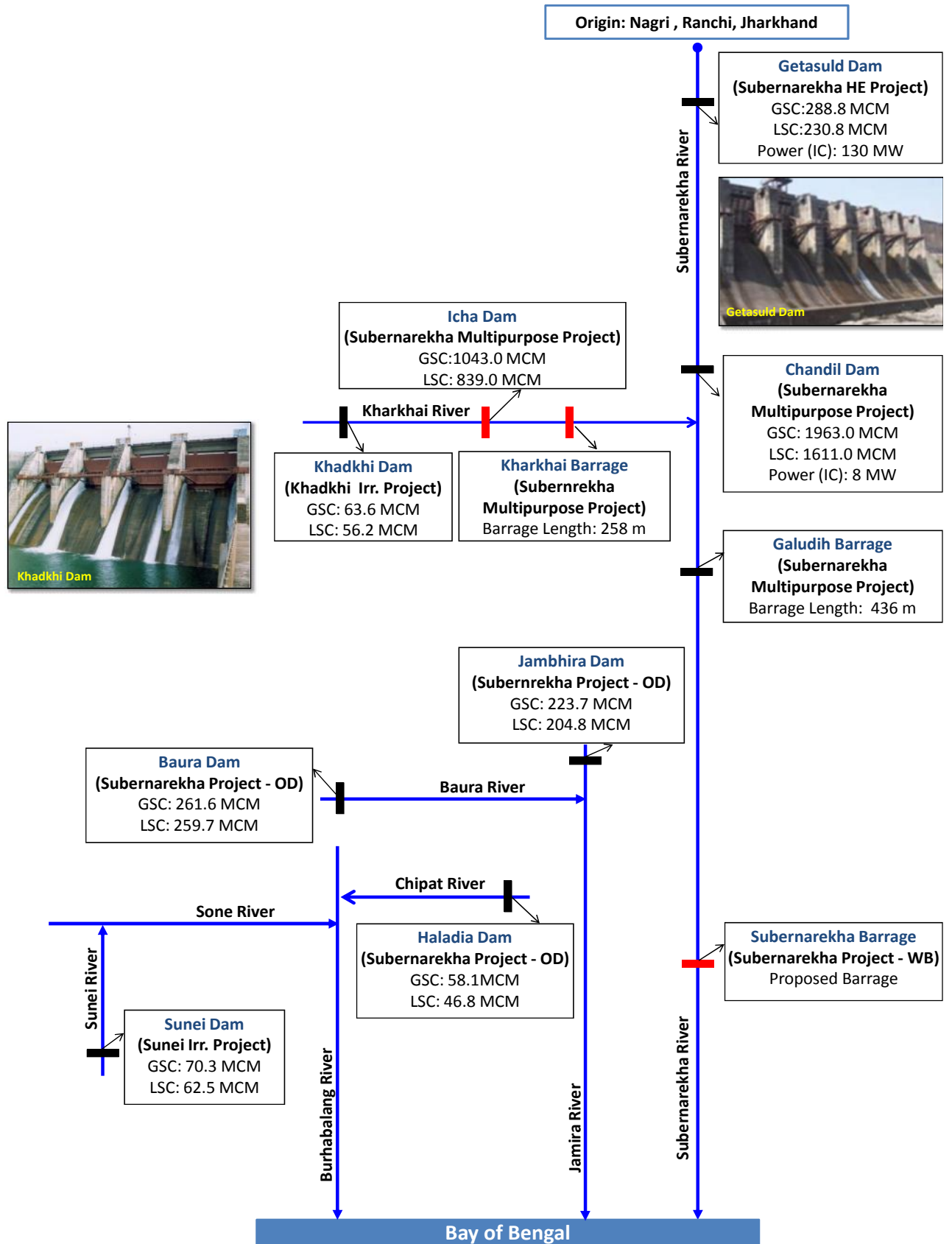




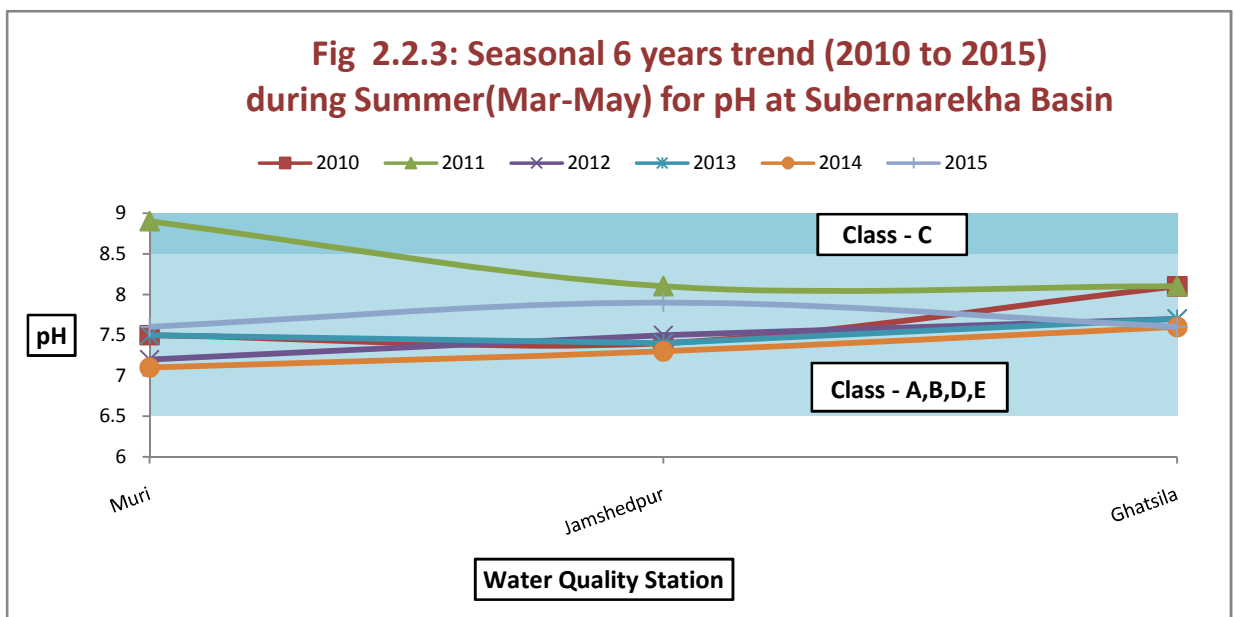
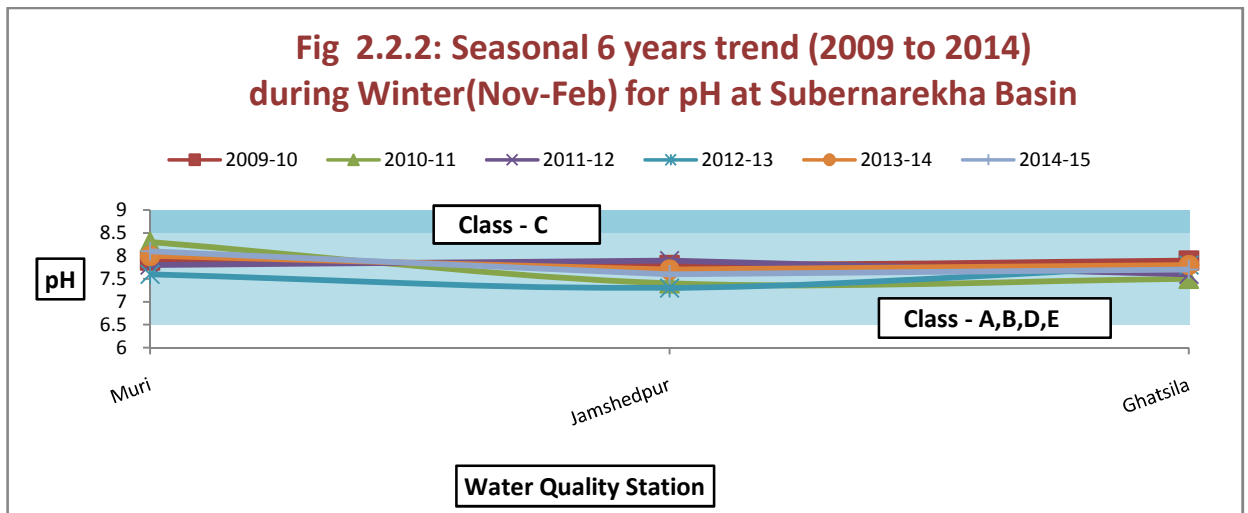
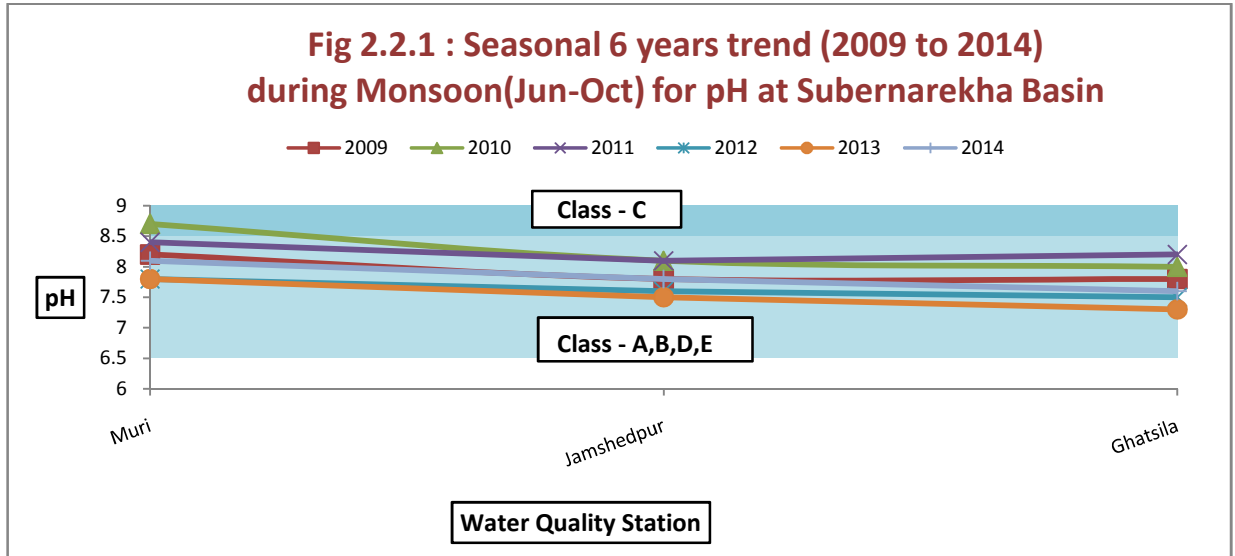
State Wise Subernarekha Basin Area (Sq.km.)



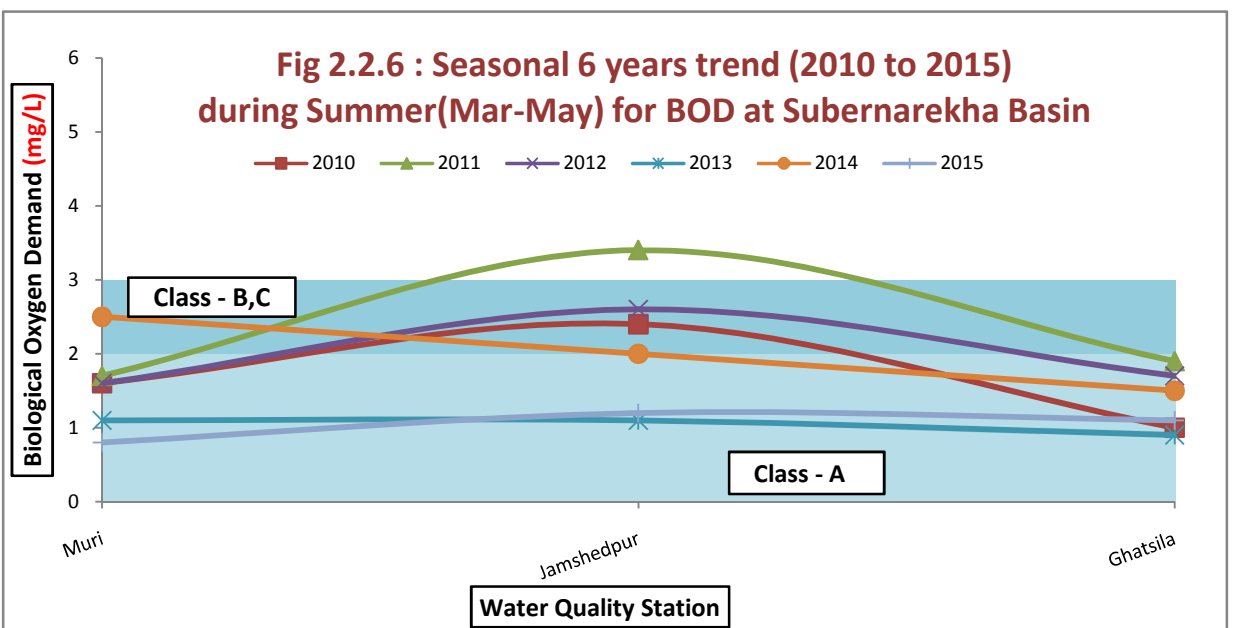
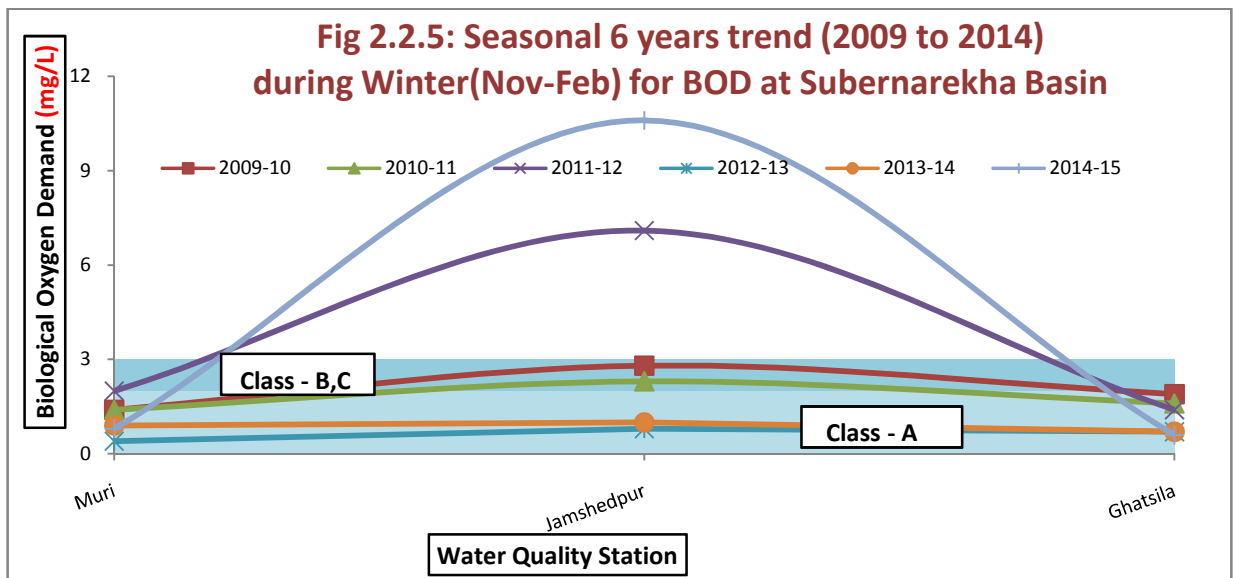
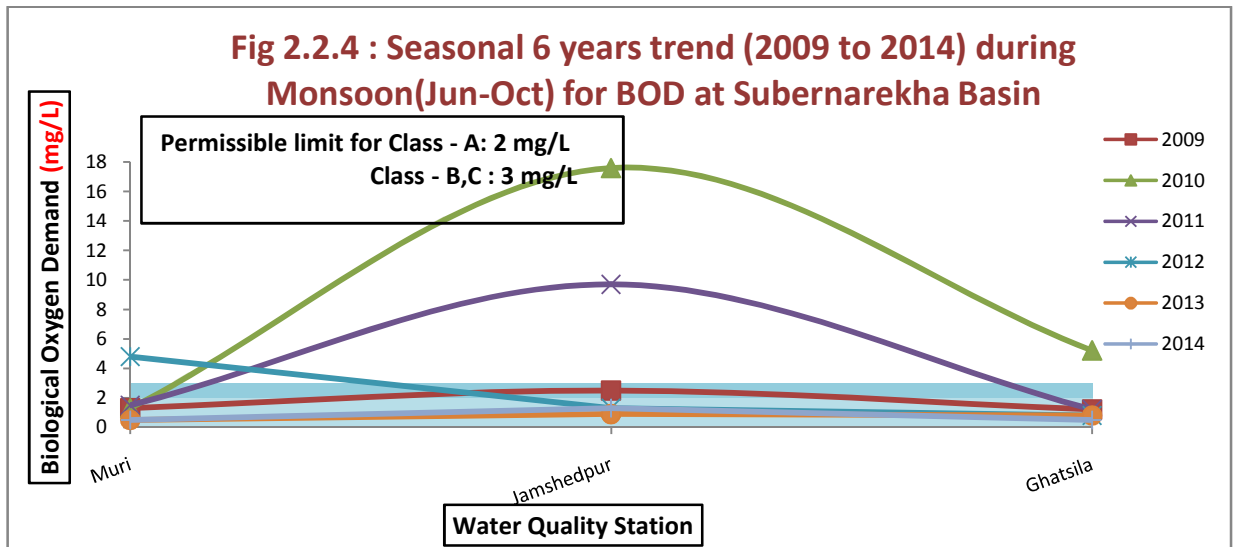
Subernarekha River Flow Line Diagram



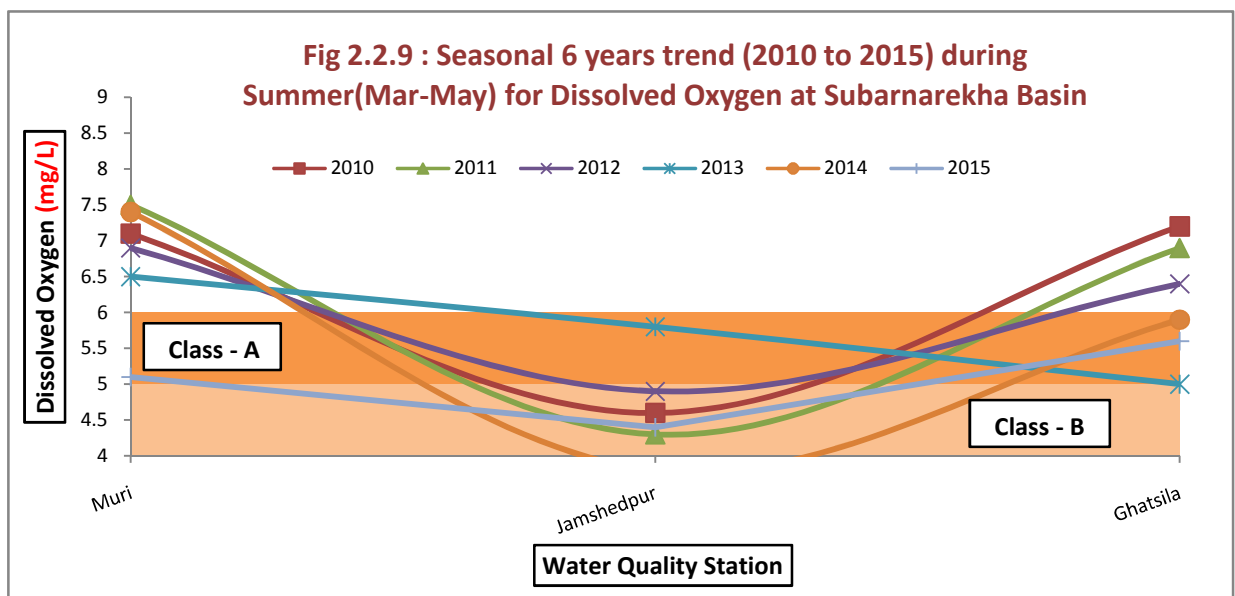
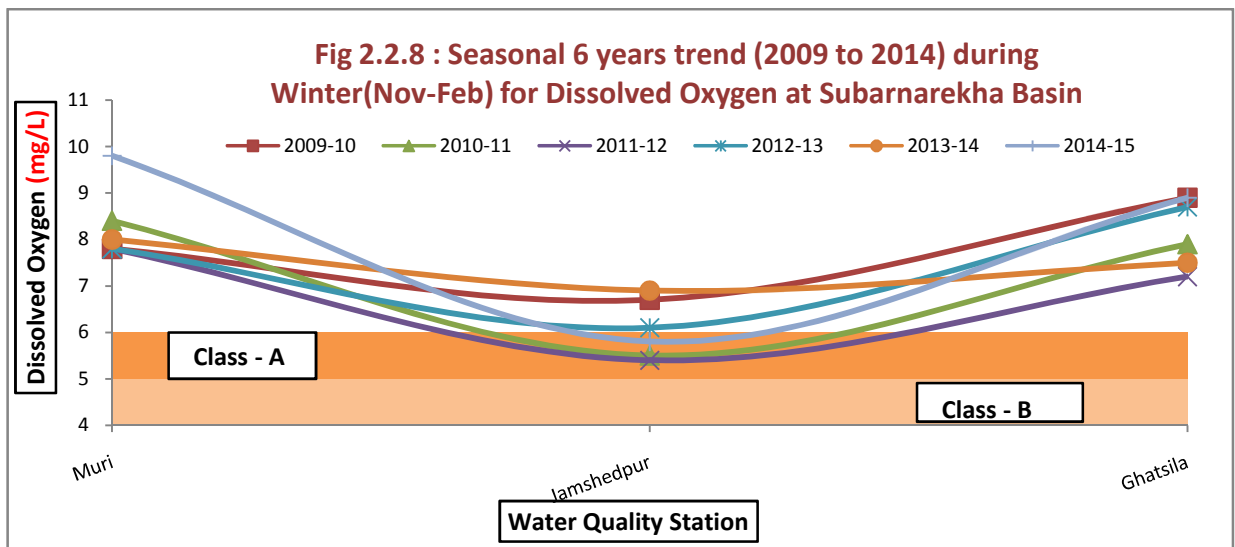
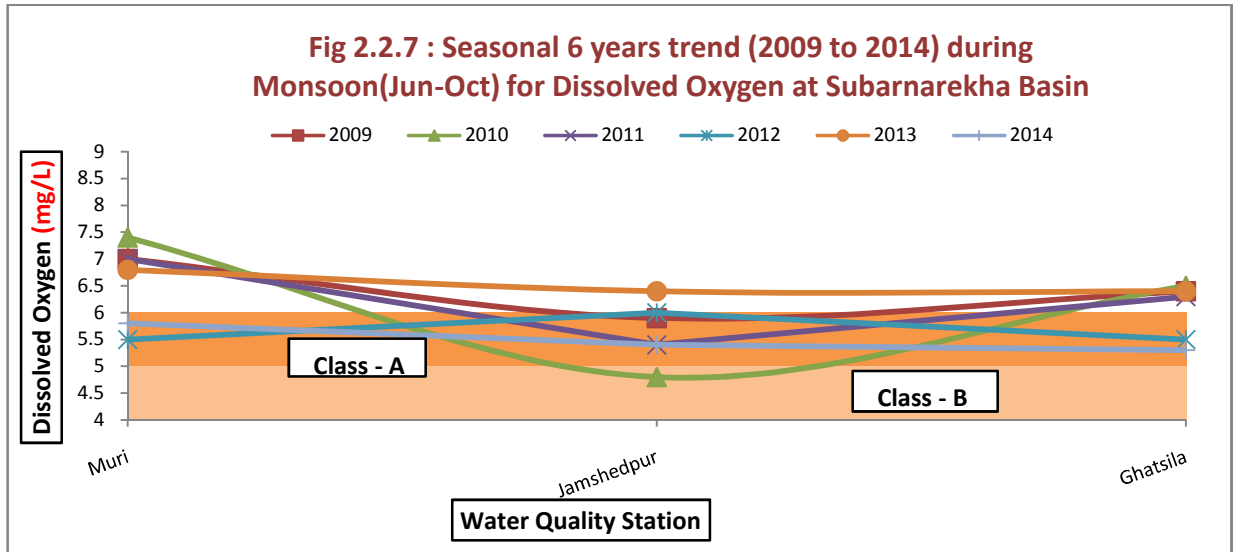
Basin: Subernarekha (Water Quality Parameter : pH)



Basin: Subernarekha (Water Quality Parameter : BOD)



Basin: Subarnarekha (Water Quality Parameter : Dissolved Oxygen)



Basin: Subarnarekha (Water Quality Parameter : Total Hardness)

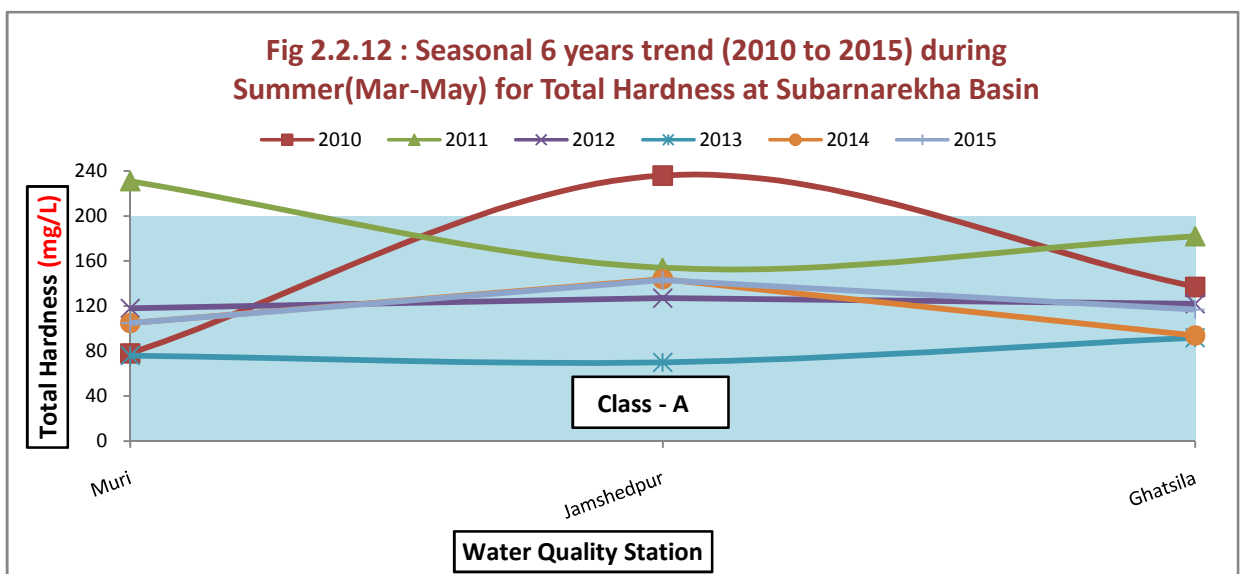
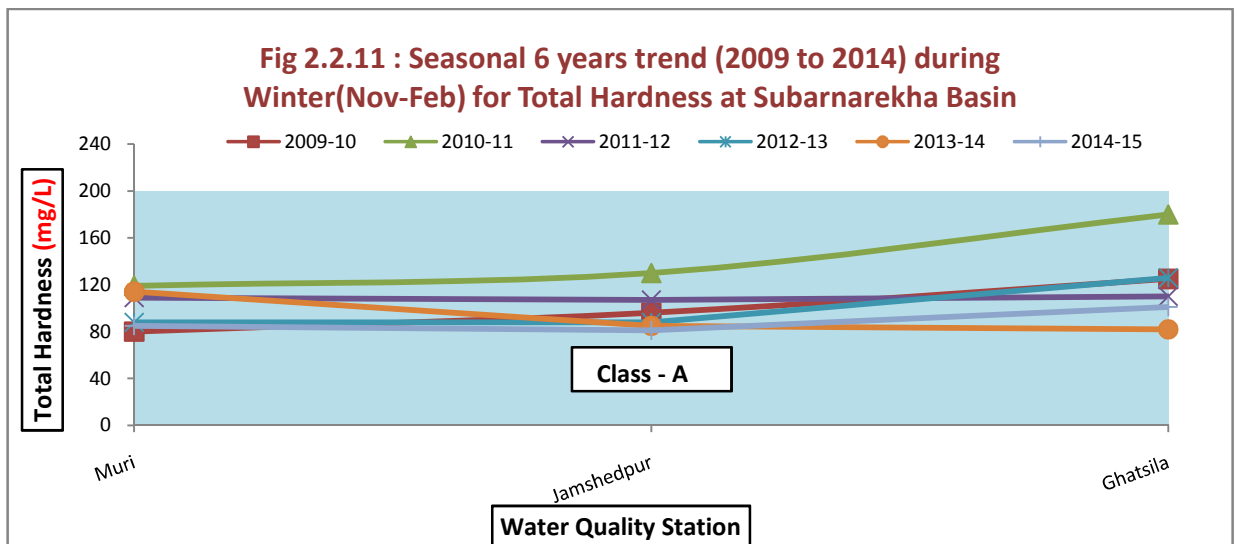
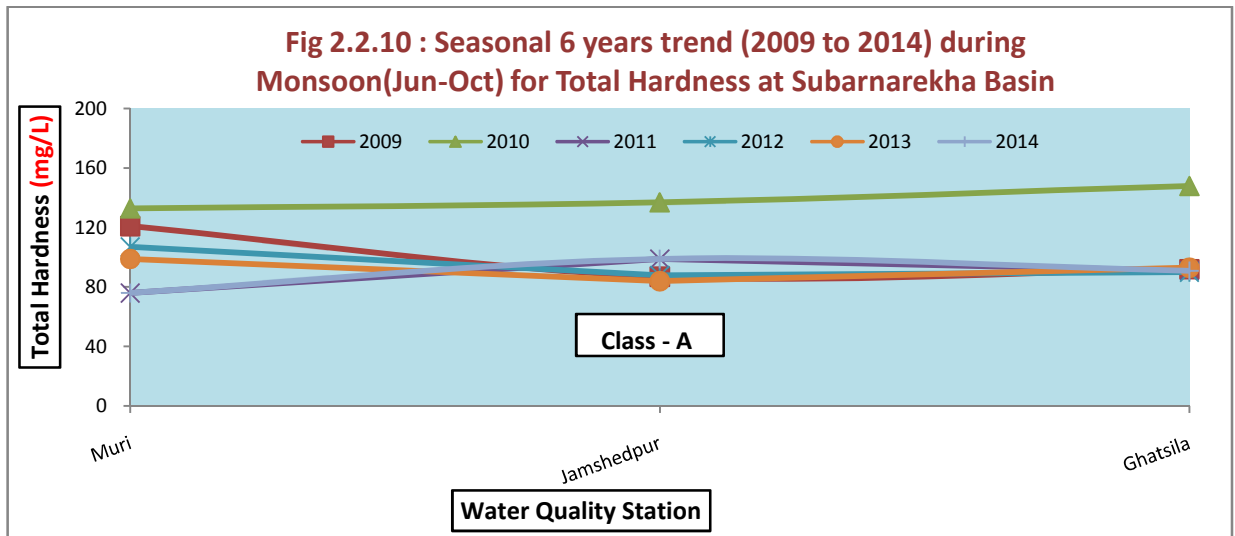
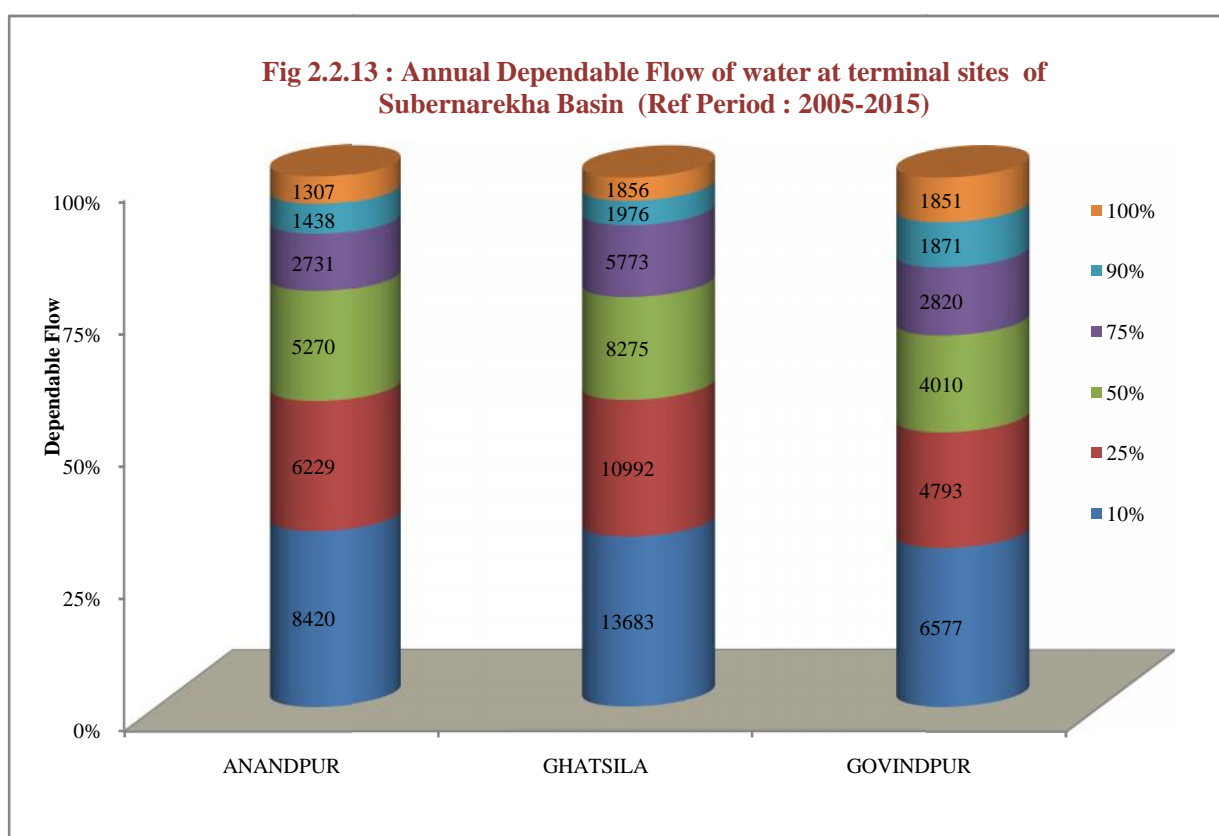


Table 2.2.1: Annual Dependable Flow Of Water at Terminal Sites Of Subernarekha Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	ANANDPUR	6/2005 to 5/2015	8420.46	6229.25	5270.46	2730.96	1438.33	1307.19
2	GHATSILA		13683.45	10991.64	8275.45	5773.49	1975.56	1856.45
3	GOVINDPUR		6577.29	4793.11	4010.36	2819.78	1871.19	1850.82

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar



2.2.5 Land Use Statistics: Table 2.2.2 to Table 2.2.4 present below the land use pattern, gross irrigated area and net irrigated area for Subernarekha basin as compared to all basins (Region-III).

TABLE 2.2.2: LAND UTILISATION PATTERN OF SUBERNAREKHA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Subernarekha	27772.33	7132.90	4857.73	2170.51	5293.38	8317.80	2063.30	10381.10
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.2.3: GROSS AREA IRRIGATED BY SOURCES OF SUBERNAREKHA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

RIVER BASINS (REGION-III) DURING 2017-18 (AREA IN SQ. KM.)									
Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Subernarekha	314.75	80.11	394.87	94.21	468.15	134.14	602.30	74.47	1165.84
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.2.4: NET AREA IRRIGATED BY SOURCES BY SUBERNAREKHA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Subernarekha	24.72	0.00	24.72	101.66	22.34	82.58	104.93	923.61	1154.91
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.2.6 Urban Centres: The important cities/ towns in the basin are Jamshedpur and Muri.

2.2.7 Industries: Important industries in the basin are tobacco products, cement, asbestos sheets, glass, ceramics, Locomotives & Coaches, automobiles, agricultural equipment, wires & cables, iron & steel machinery, metal tubes & conduits, copper & brass, chemicals acids & caustics, fertilizers and Soaps.

2.2.8 Minerals: The important minerals found in the basin are Coal, Iron Ores, Bauxite, Copper, Chromium Gold, Vanadium Lime stone, Dolomite, Asbestos, China Clay, Talc and building Stone.

2.3 BRAHMANI AND BAITARANI BASIN

Location: The basin consisting of Brahmani and Baitarani is situated within the geographical co-ordinates of north latitude 20°28' to 23°38' and east longitude 83°55' to 87°3'. This basin is bounded on the north by the Chhotanagpur plateau, on the south-west by Mahanadi basin and on the east by the Bay of Bengal. The basin flows through Jharkhand, Chattisgarh, and Odisha States and its catchment area is 51,822 sq km which is nearly 1.7% of the total geographical area of the country.

2.3.1 Brahmani Basin

The Brahmani is known as the South Koel in the upper reaches. It originates near Nagri village in Ranchi District at an elevation of about 600 metre. The total length of its run is about 799 km. The Brahmani sub basin covers 39,033 sq. km and has a long sausage shape. The principal tributaries of this river are Sankh, Tikra and Karo. The climate of the basin is tropical with a fairly hot summer and moderately cold winter. The basin is influenced by south west monsoon from June to October.

2.3.1.1 Irrigation Projects: Rengali (major) and Ramiala irrigation project (medium) are the prominent projects in the catchment area of the basin.

2.3.1.2 Hydrological Observation Sites: There are total 9 H.O. sites out of which two sites are exclusively for gauge data only. Gauge, Discharge, Sedimentation and Water Quality observation are being conducted at five sites and one site is maintained for recording observation on gauge and quality and one site is for gauge and discharge (as per 2014-15 data).

2.3.2 Baitarni Basin

The Baitarani is one of the important east flowing rivers of peninsular India, flowing eastward and joining the Bay of Bengal. The river originates in the hill ranges of Keonjhar District of Odisha near Dumuria village at an elevation of about 900 metre. The river flows through Jharkhand and Odisha states. The main tributaries of Baitarani are the Salandi and the Matai. The total catchment area of this basin is 12,789 sq km and is roughly circular in shape. More than 93% of the catchment area falls in Odisha. The basin is surrounded by the Brahmani on the south and west, the Subernarekha on the north, the Burhabalang and the Bay of Bengal on the east. The river is flashy in nature; having a total length of 355 km with the upper reach up to Anandpur is in the hilly region. There is a considerable fall in elevation from RL 367m at Champua to RL 28m at Anandpur. The basin receives most of the rainfall from the south-west monsoons during the period from June to October and average rainfall is 1450 mm.

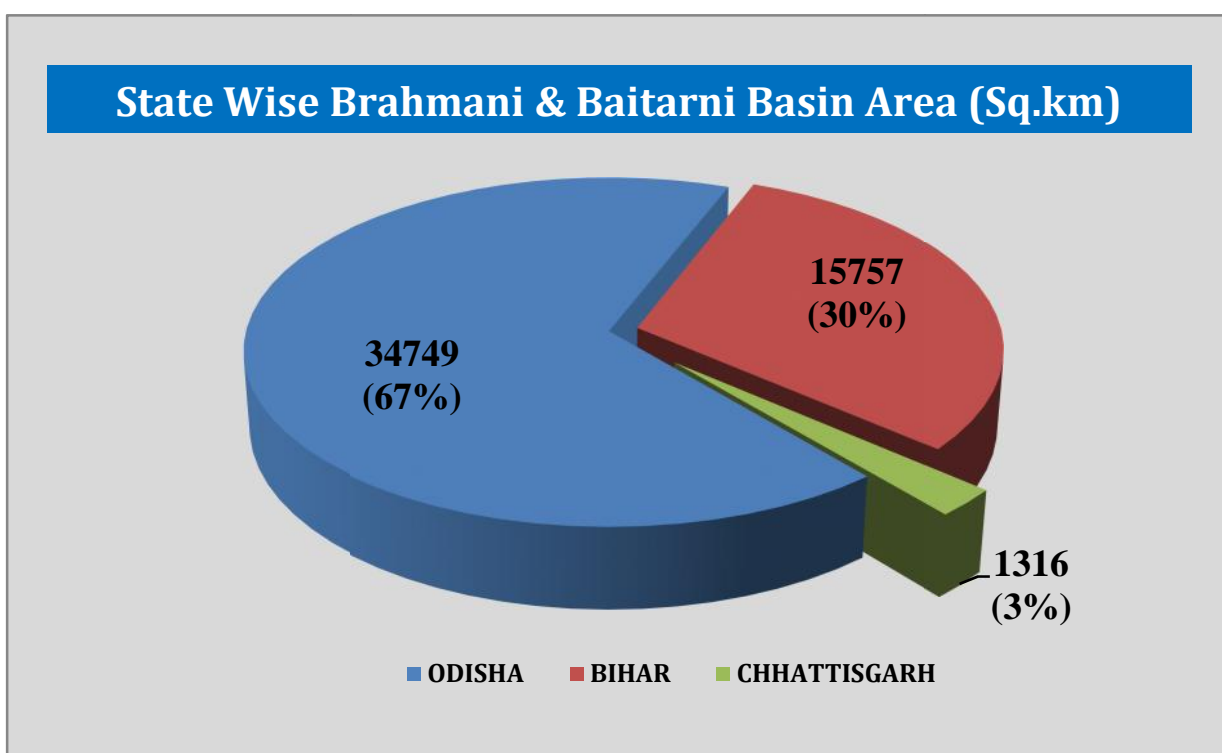
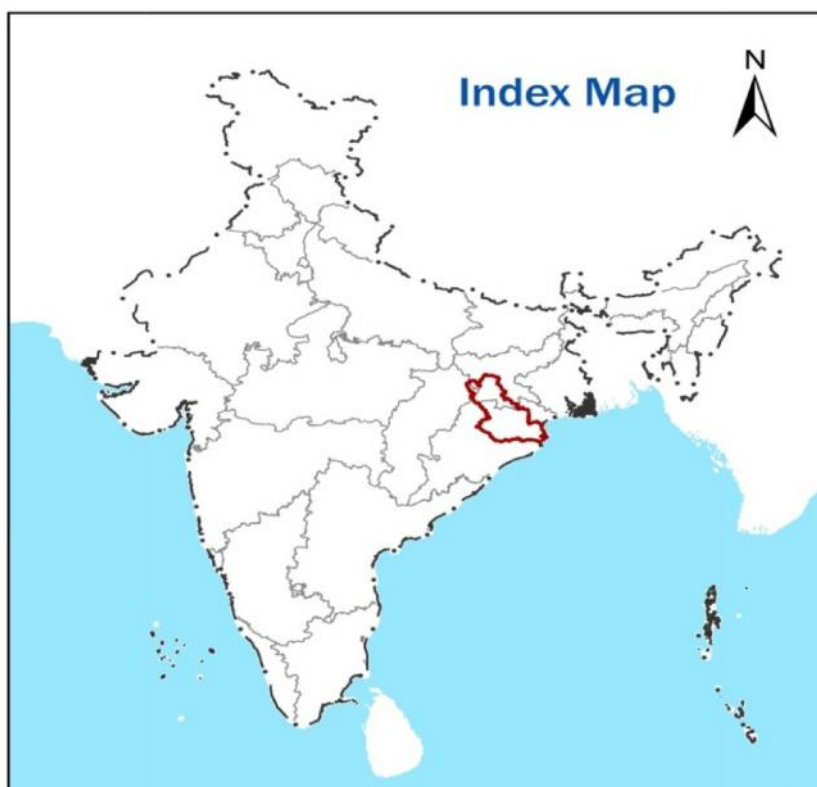
2.3.2.1 Irrigation Projects: Akhuapada, Salandi, Anandpur Barrage and Kanpur Irrigation System are the Major Irrigation Projects in the catchment area of the Baitarni river basin.

2.3.2.2 Hydrological Observation Sites: Central Water Commission is maintaining 6 sites (including seasonal rainfall site at Thakurmunda which remains operative only during monsoon), out of which 2 are of GDSQ (Gauge, Discharge, Sediment, Quality) type, 3 are of G (Gauge) type and 1 is RF (Rainfall) type (as per 2014-15 data).

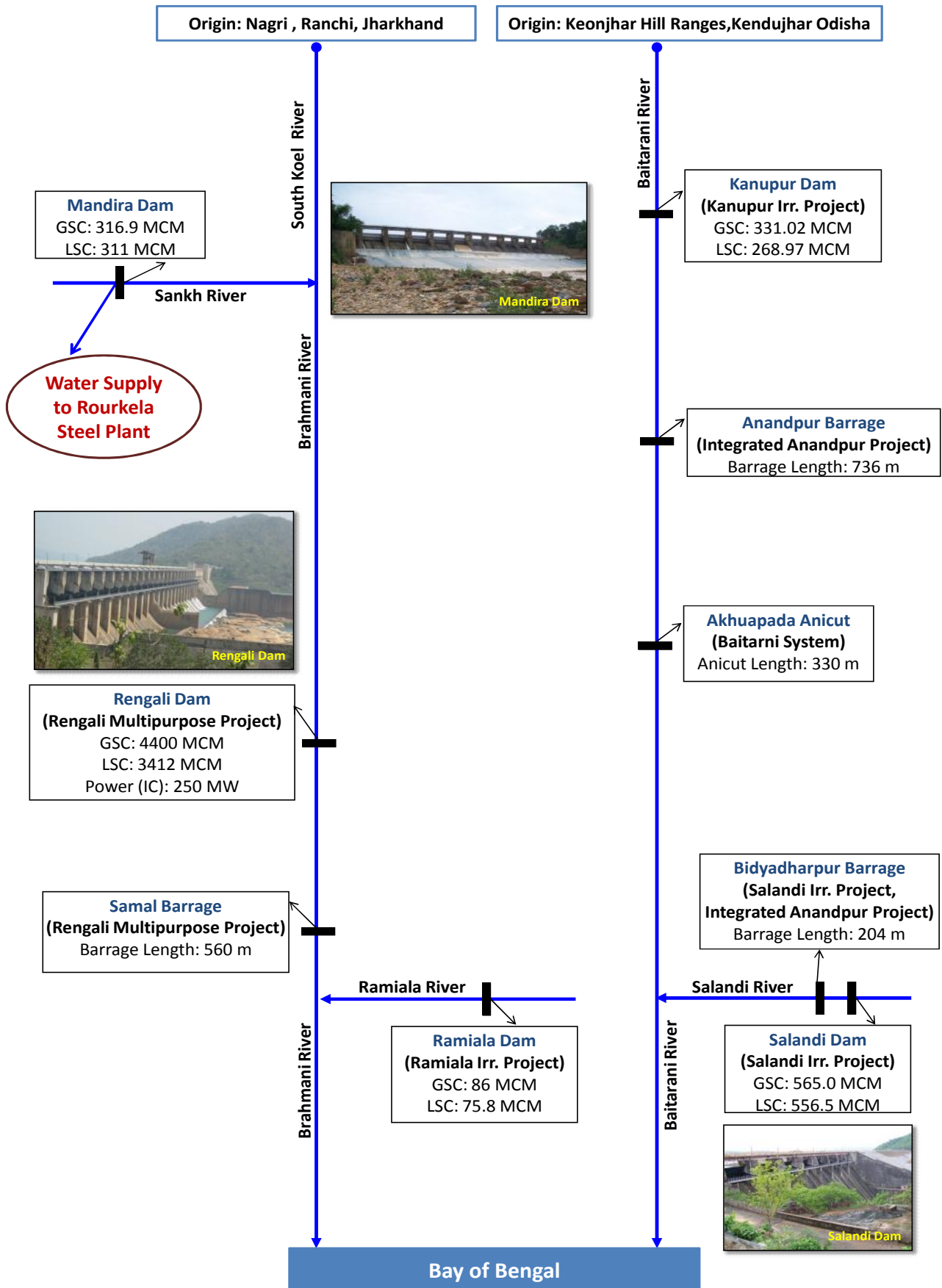
2.3.3 Peak Water Level: In the Brahmani & Baitarni basin, 8 observation sites have been reported and Anandpur is the oldest site established on 07.03.1972. Gauge/Discharge observations are being recorded since then. Maximum Peak water recorded at 378.95 metre in Champua site on 23.09.2011 during the reference period 2014-15.

2.3.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for four sites of Brahmani & Baitarni basin (Fig 2.3.1 to Fig 2.3.12).





Brahmani & Baitarni Rivers Flow Line Diagram



Basin: Brahmani & Baitarni (Parameter : pH)

Fig 2.3.1 : Seasonal 7 years trend (2008 to 2014) during Monsoon(Jun-Oct) for pH at Brahmani Basin

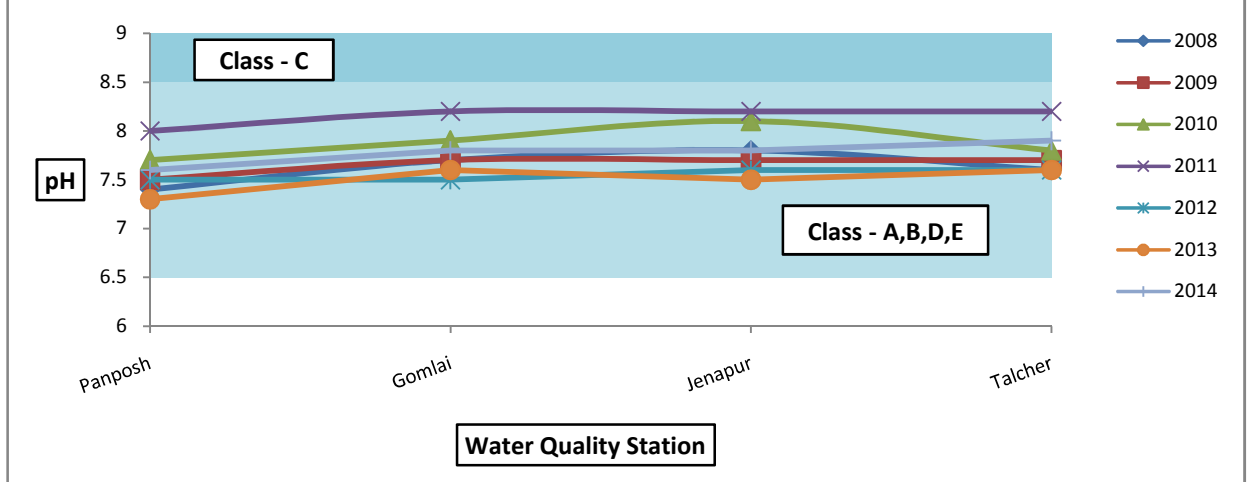


Fig 2.3.2 : Seasonal 7 years trend (2008 to 2014) during Winter(Nov-Feb) for pH at Brahmani Basin

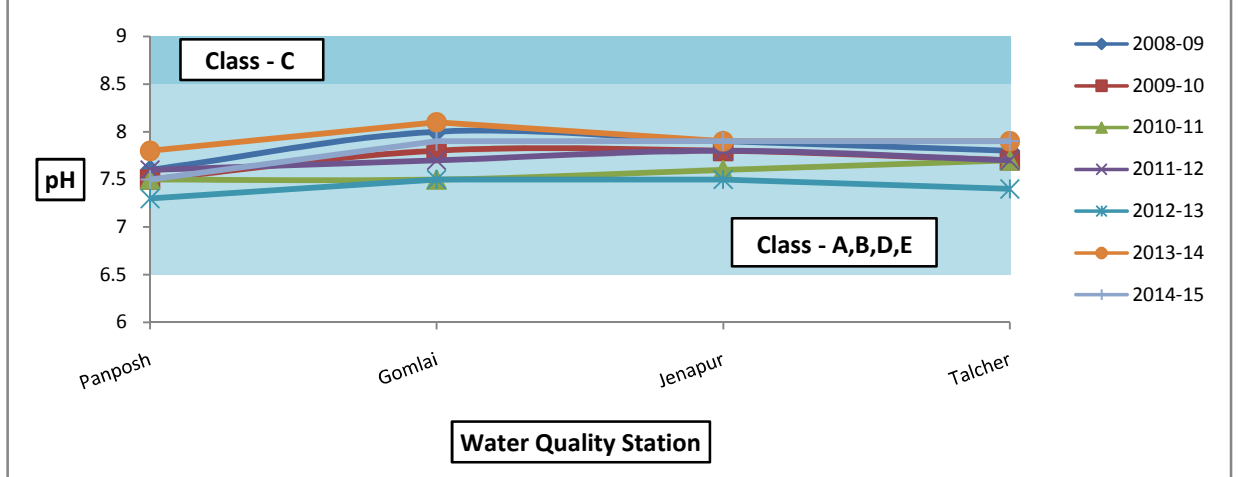
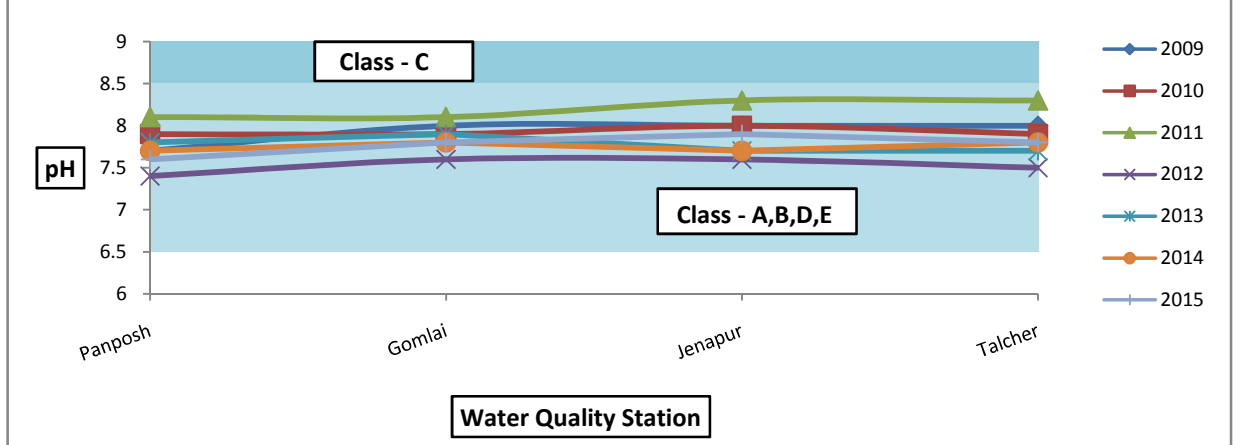
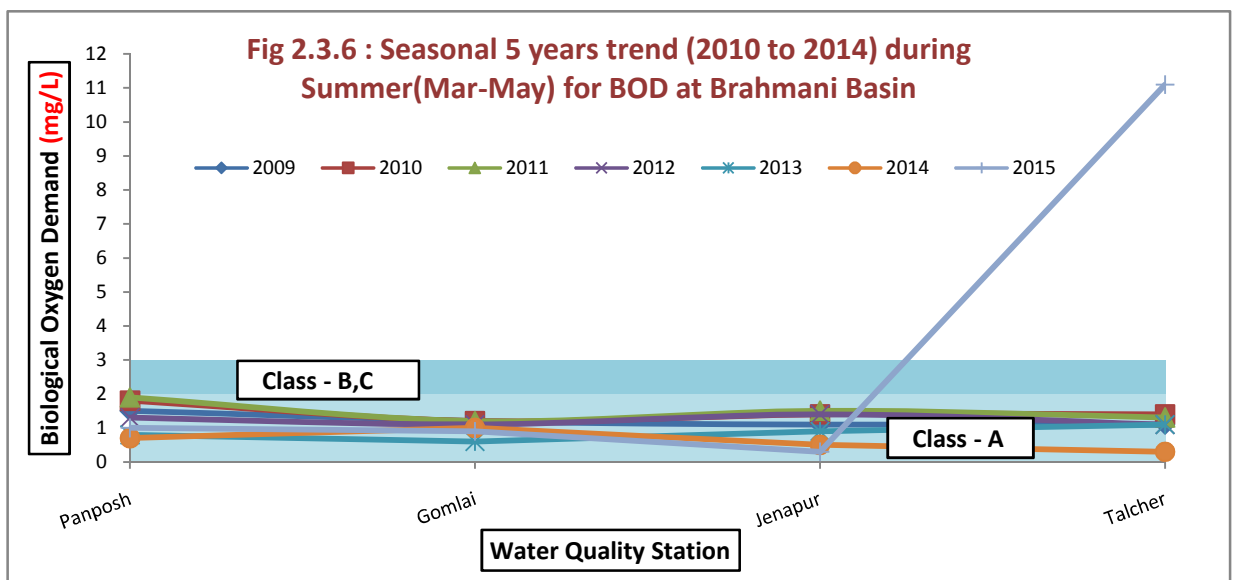
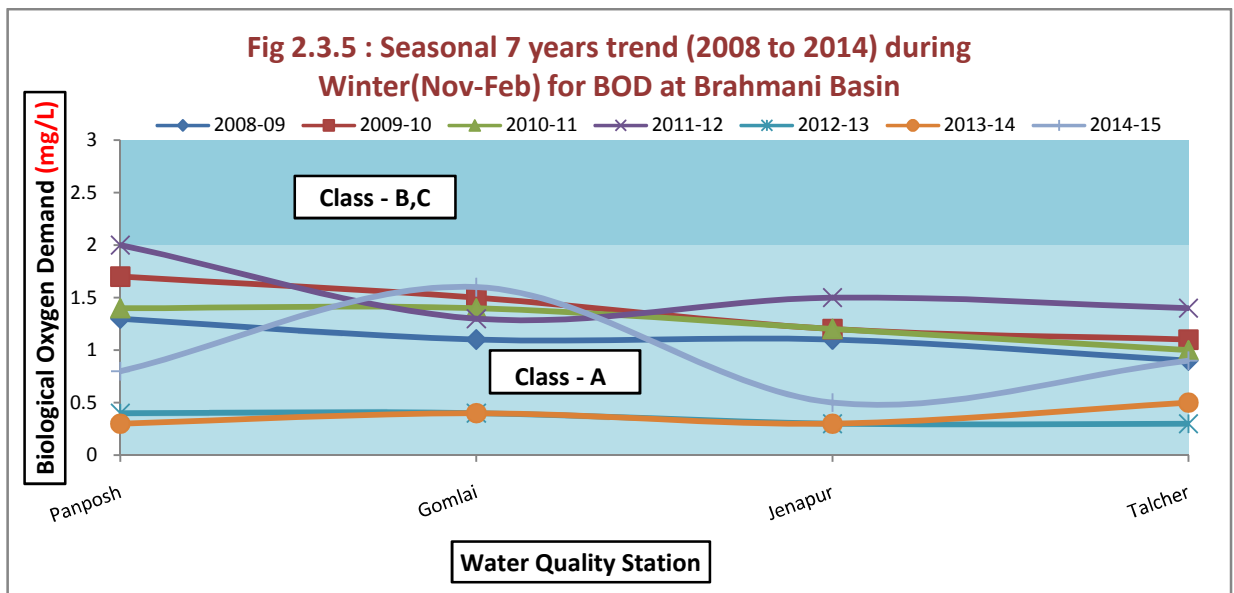
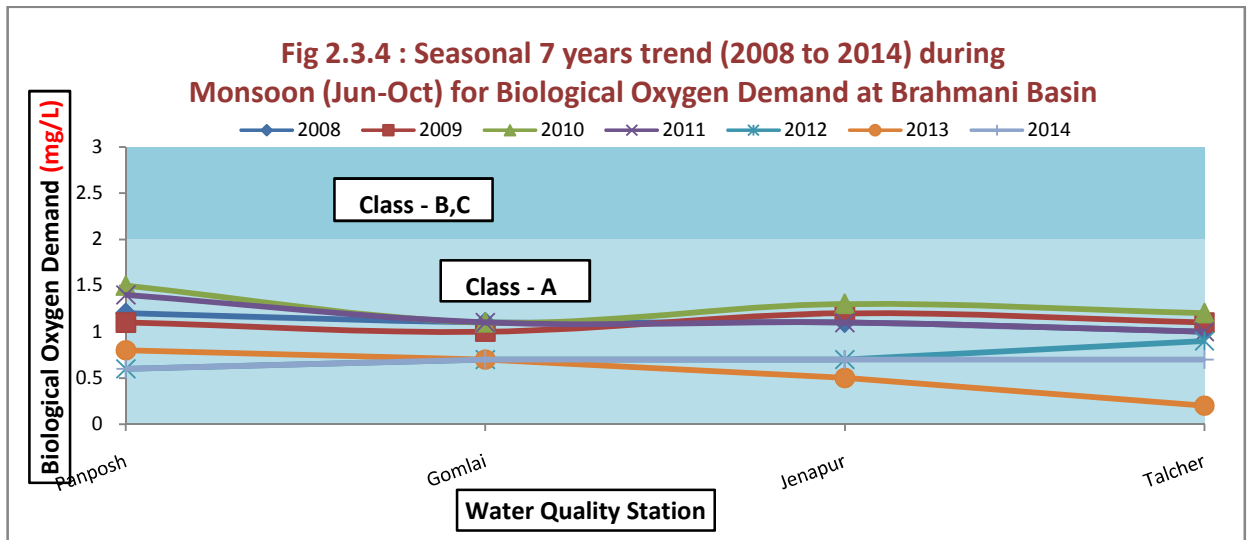
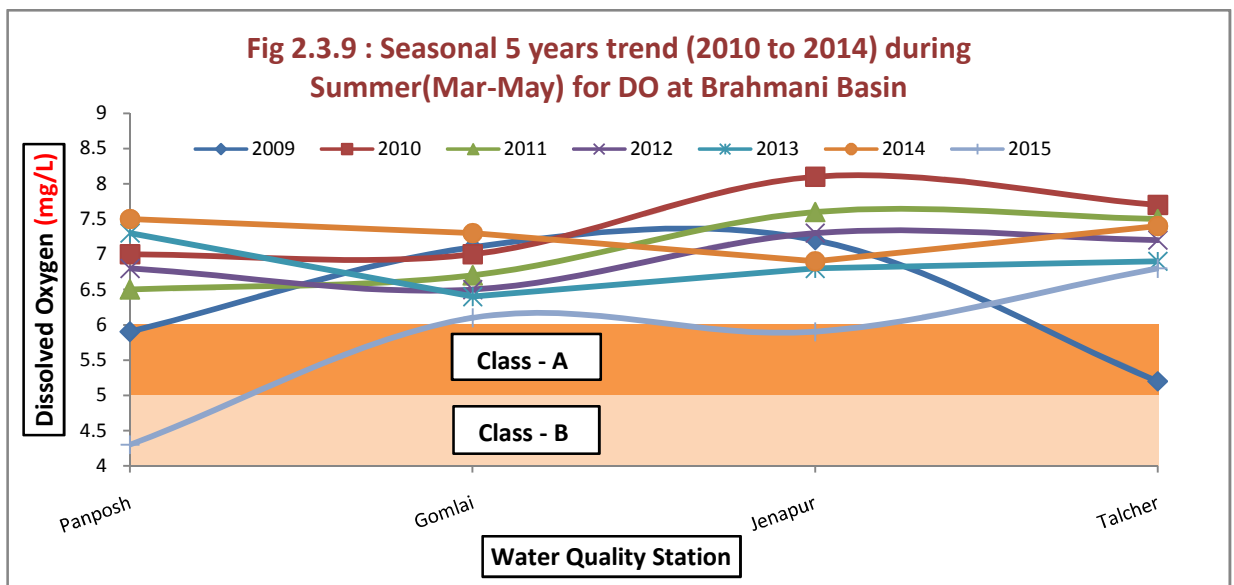
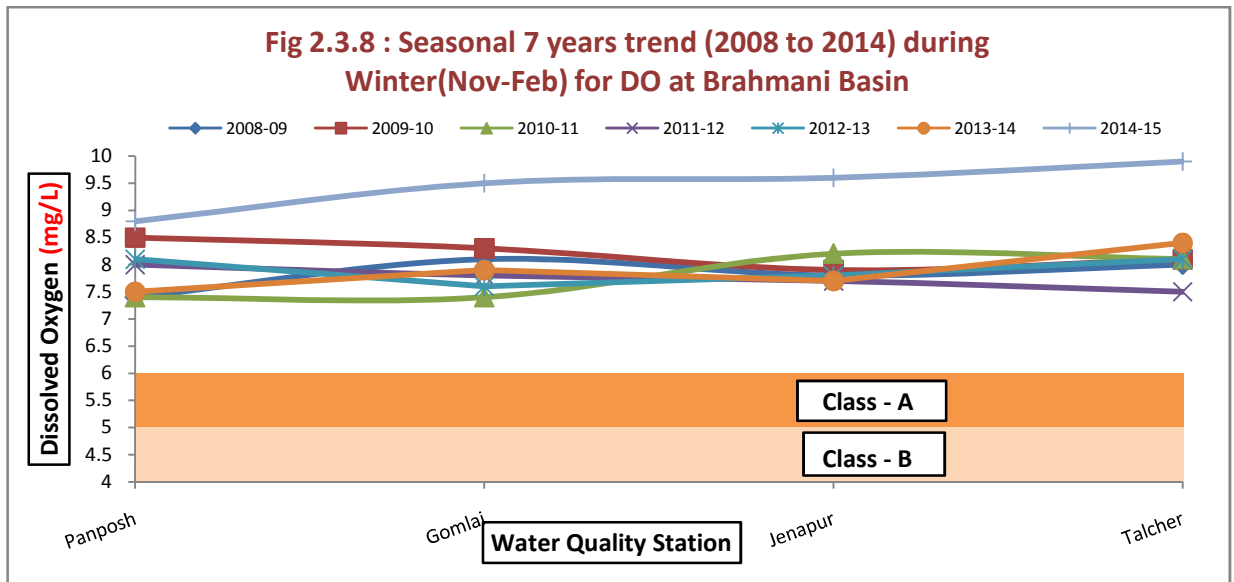
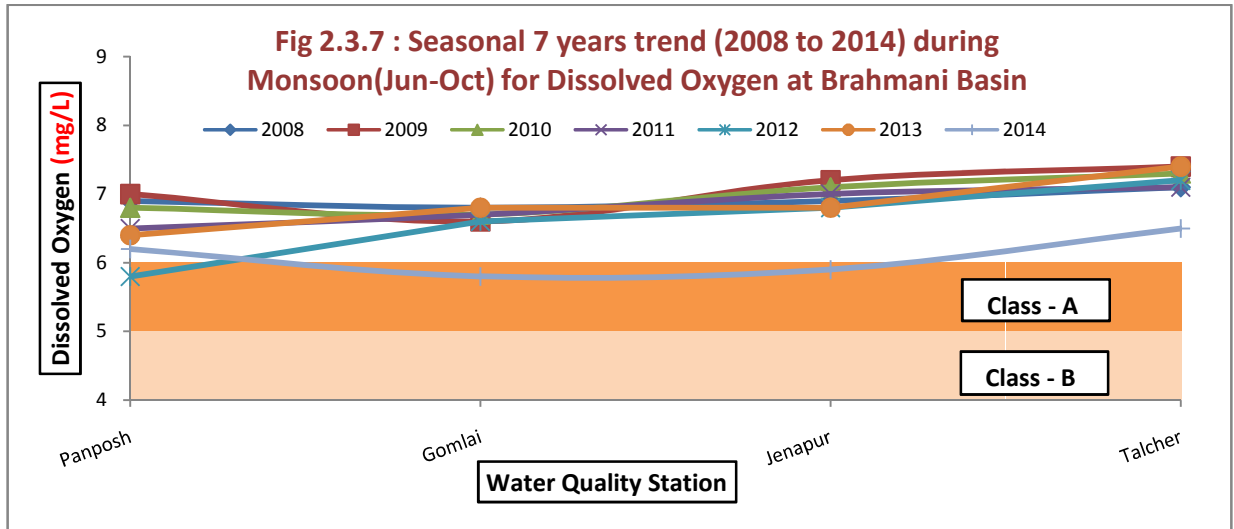


Fig 2.3.3 : Seasonal 7 years trend (2008 to 2014) during Summer (Mar-May) for pH at Brahmani Basin





Basin: Brahmani & Baitarni (Water Quality Parameter : Dissolved Oxygen)



Basin: Brahmani & Baitarni (Water Quality Parameter : Total Hardness)

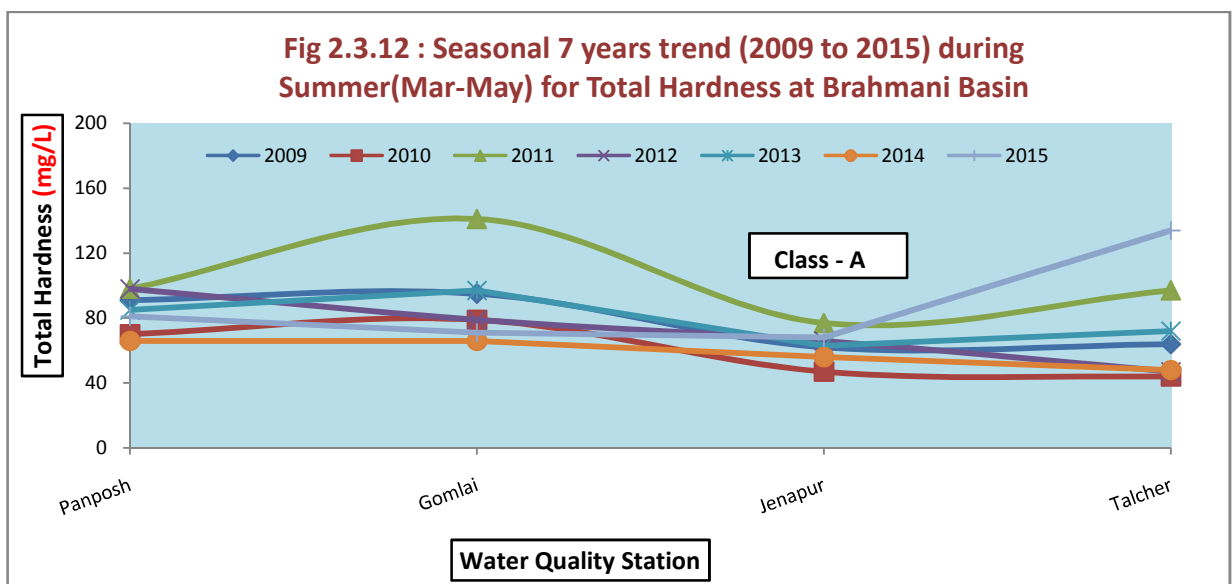
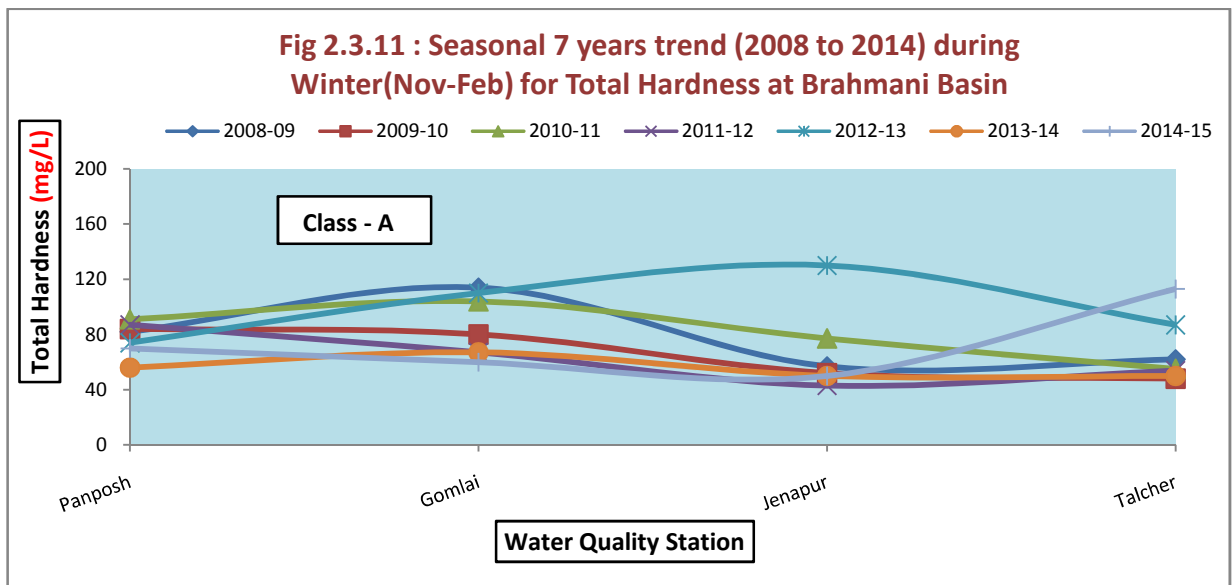
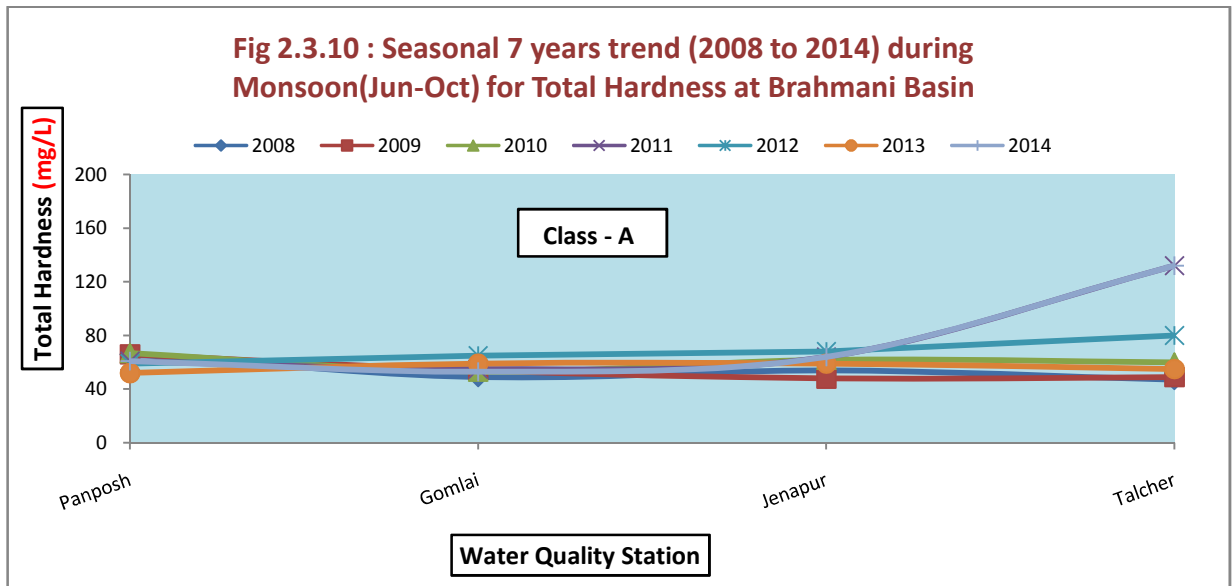
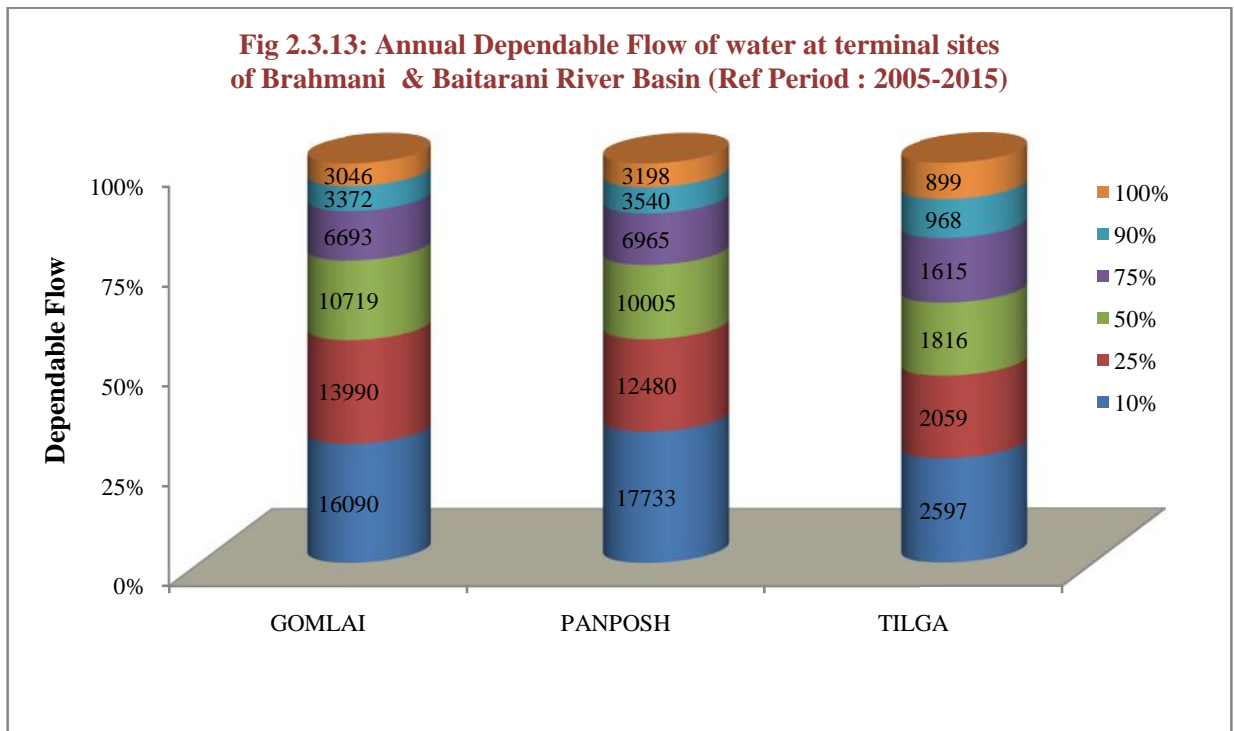


Table 2.3.1: Annual Dependable Flow Of Water at Terminal Sites Of Brahmani & Baitarani River Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	GOMLAI	6/2005 to 5/2015	16089.94	13990.08	10718.79	6692.60	3372.33	3046.08
2	PANPOSH		17732.99	12480.41	10005.12	6964.94	3539.54	3198.21
3	TILGA		2596.75	2058.72	1816.04	1614.98	967.61	898.72

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar



2.3.5 Land Use Statistics: Table 2.3.2 to Table 2.3.4 present below the land use pattern, gross irrigated area and net irrigated area for Brahmani & Baitarni basin as compared to all basins (Region-III).

TABLE 2.3.2: LAND UTILISATION PATTERN OF BRAHAMANI & BAITARANI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Brahamani & Baitarani	53196.14	17909.73	7380.69	4510.04	9085.62	14310.06	1257.44	15567.50
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.3.3: GROSS AREA IRRIGATED BY SOURCES OF BRAHAMANI & BAITARANI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)									
Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Brahamani & Baitarani	1711.63	221.79	1933.42	96.31	494.36	145.22	639.58	104.86	2774.17
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.3.4: NET AREA IRRIGATED BY SOURCES OF BRAHAMANI & BAITARANI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Brahamani & Baitarani	27.86	0.00	27.86	55.85	25.30	93.97	119.27	2409.73	2612.71
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.3.6 Urban Centres: The important towns in the basin are Champua, Karanjia, Keonjhar, and Anandpur.

2.3.7 Minerals: The important minerals found in the basin are Iron Ore, Copper, Chromite, Asbestos, Manganese, Atomic Minerals, China Clay and Soap Stone.

2.3.8 Industries: Major industries in the basin are Steel Plants and Aluminium plants. There exist a number of other industries like fertilizers, cement, explosives chemicals, machine tools, Ferro-Manganese and sponge Iron Plant.

2.3.9 Minerals: The basin is rich in mineral resources. Coal, Iron ore, Copper, Chromites, Limestone, Dolomites, Bauxite, Manganese, China clay, Fire clay, Asbestos, Atomic Minerals and Soap Stone are the main mineral resources of this basin.

2.4 GODAVARI BASIN

Location: The Godavari River, the largest of the peninsular rivers and third largest in India, covers about 10% of India's total geographical area. The catchment area of the river is 3,12,812 sq km and is spread in the States of Maharashtra (48.6%), erstwhile Andhra Pradesh (23.4%), Madhya Pradesh (10.0%), Chhattisgarh (10.9%), Odisha (5.7%) and Karnataka (1.4%). The basin lies in the Deccan Plateau and is situated between latitude 16° 19' north and 22° 34' north and longitude 73° 24' east and 83° 4' east. The Godavari river rises in the Nasik district of Maharashtra, about 80 km from the Arabian sea at an elevation of 1,067 metre after flowing for about 1,465 km in a generally south-east direction, through Maharashtra and erstwhile Andhra Pradesh it falls into the Bay of Bengal. The Godavari basin is bounded by the Satmala Hills, the Ajanta range and the Mahadeo hills on the north, by the Eastern Ghats on the south and the east and by the Western Ghats on the west. The basin is roughly triangular in shape and the main river itself runs practically along the base of the triangle.

The western edge of the basin is an almost unbroken line formed by the Sahyadri range of the Western Ghats, from 600 to 2100 metre height. It has the heaviest rainfall and the dampest climate in the basin.

About 64 km from its source, the Godavari receives the waters from Dharna, on its right bank and the Kadana joins it from the left. The combined waters of the Pravara and Mula which rise in the hills of Akola join the river about 217 km from its source, About 338 km lower down, while still in Maharashtra, the river receives the combined waters from the Purna and Dudhna rivers and after a further 138 km at the border of Maharashtra and erstwhile Andhra Pradesh, the waters of the Majira river joins it from the south. At this point, Godavari flows at an elevation of about 329 metre.

The Pranhita river, conveying the combined waters of the Penganga, the Wardha and Wainganga, which drain Nagpur and southern slopes of the Satpura ranges, falls into Godavari about 306 km below its confluence with the Majira. Forty eight km lower, the waters of the Indravathi join the river. Both the Pranhita and the Indravathi are major rivers in their own right. The last major tributary is the Sabari from Odisha, which falls into the Godavari, 100 km above Rajahmundry.

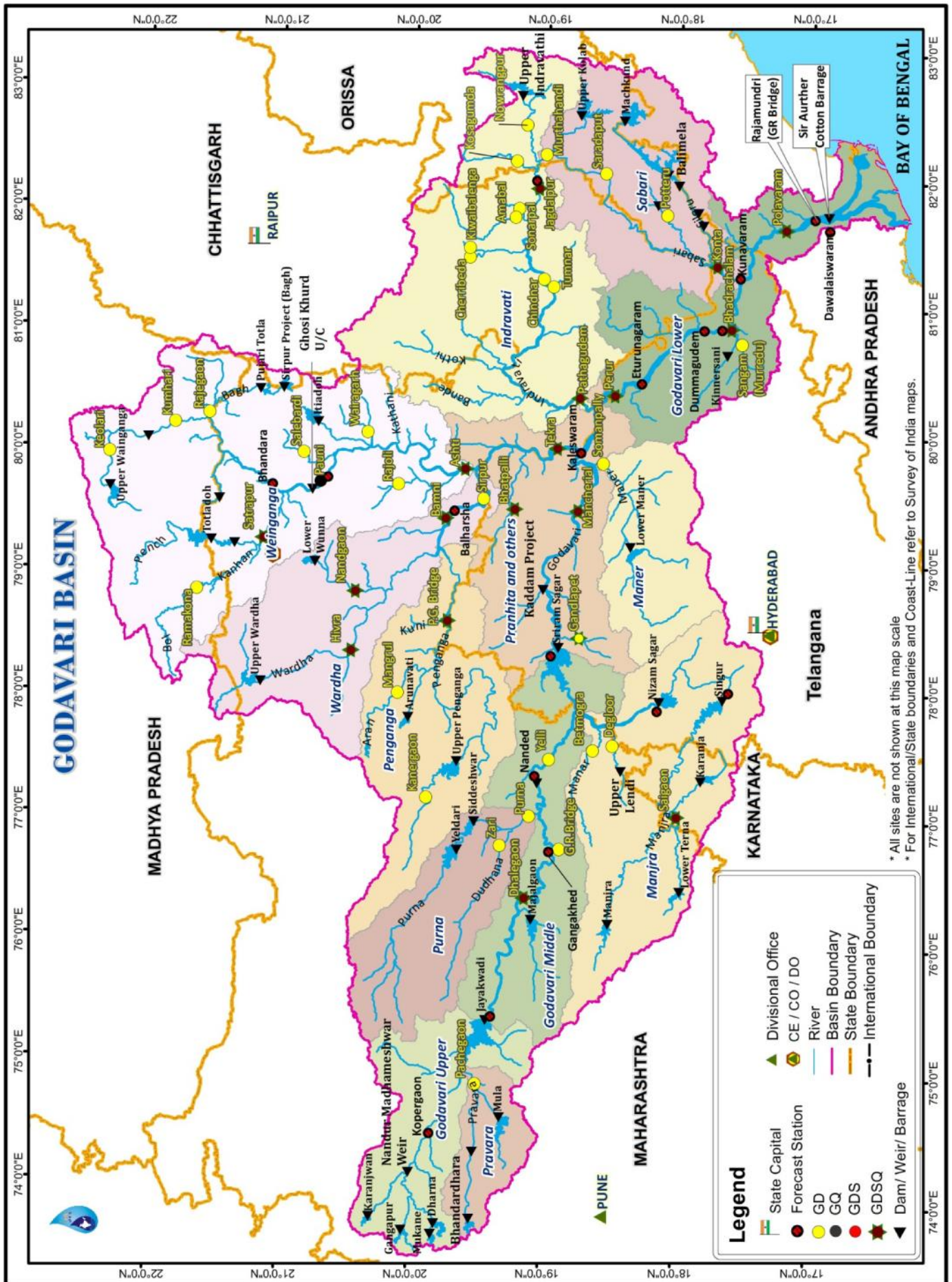
The largest tributary of the Godavari is the Pranhita with about 20% coverage of drainage area. The Pravara, Manjira and Maner are notable right bank tributaries, and the Purna, Pranhita, Indravathi and Sabari are important left bank tributaries. The Godavari in the upper, middle and lower reaches make up for 24.1% coverage of drainage area. The Godavari basin as whole receives 1043 mm of the annual rainfall on an average, during the southwest monsoon, which sets in mid June and ends by mid October.

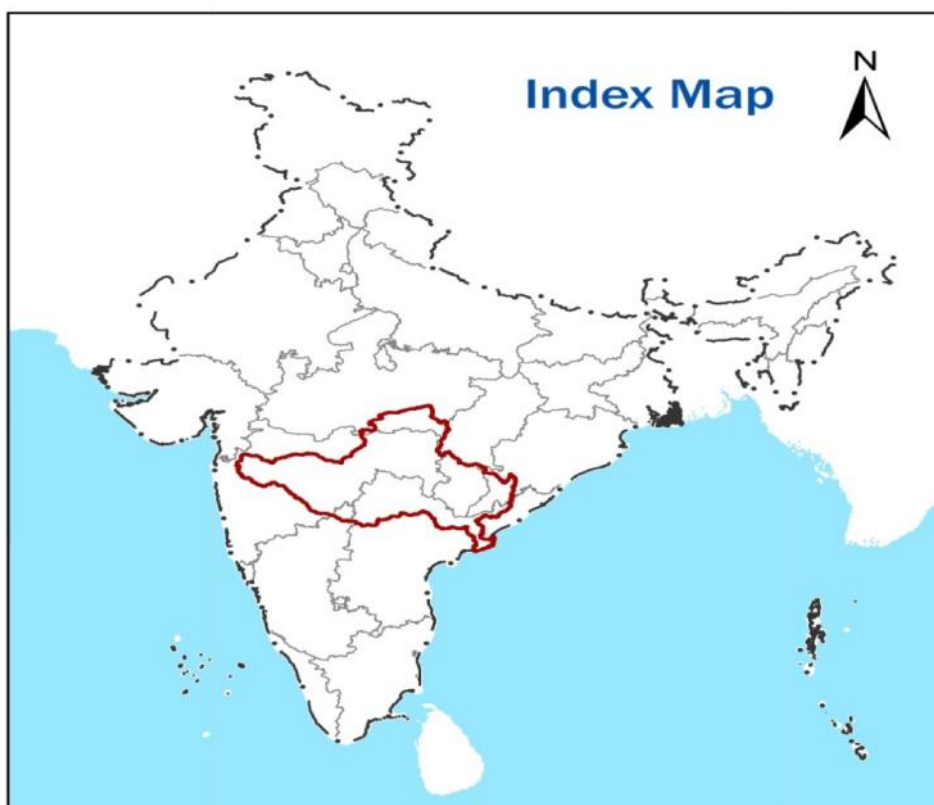
2.4.1 Irrigation Projects: Kadam, Wainganga Canal and Surthi System major Irrigation Projects are in the catchment area of Godavari Basin. The Kodwa, Godavari (Dama), Pravara, Purna, Pus, Gangapur, Bagh, and Mula Major Projects of Maharashtra are in the catchment area of Godavari Basin. There are several prominent Major Irrigation Projects like Waghed, Ozarkhed, Karanjawan, Pallakhed and Madmeswar, Jayakwadi Stage-1, Bhandaradara, Manar, Adhole, SRS Project, Nizamsagar, Lower Maner, Maner Project, Manjira, Dhuti weir, Idiadoh, Cotton Barrage, Lakhnavaram, Upper Kolab and Lower Sileru situated also in the catchment areas of the river basin.

2.4.2 Hydrological Observation Sites: There are in total 30 H.O. sites out of which 30 for Gauge, 30 for Discharge and 10 for water quality (as per 2014-15 data).

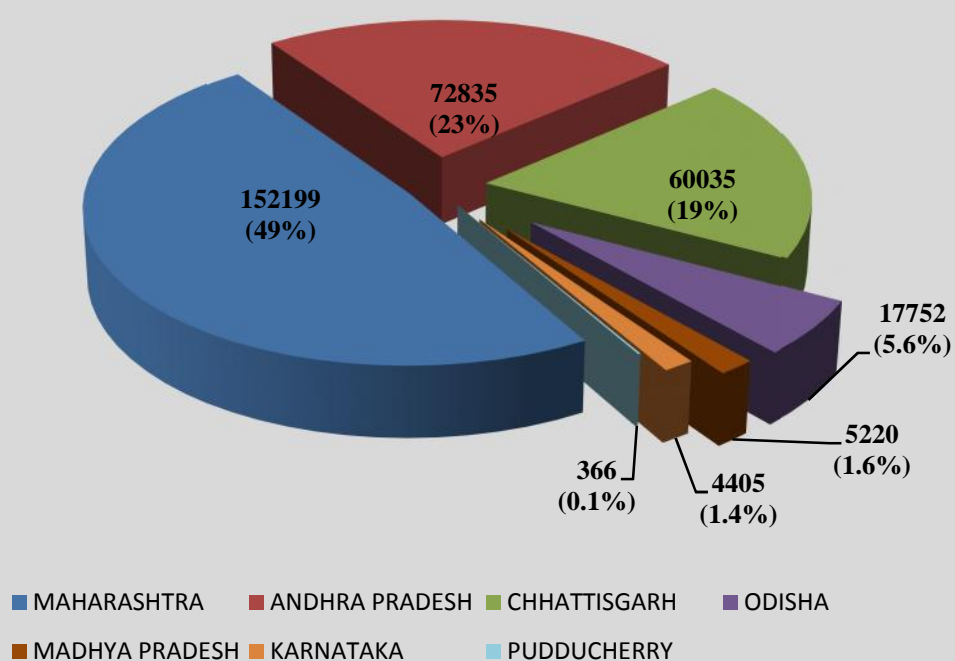
2.4.3 Peak Water Level: This is a large basin in area in respect of drainage area. It has 48 historical sites which are maintaining the information on observations in respect of at least two or more types of data: Gauge/Discharge, Sedimentation and Water Quality. Tekra is the oldest site in the basin and established on 15.07.1964 for collecting data on Gauge/ Discharge, Subsequently, the scope has been extended to observe data on sedimentation and water quality. Among all the reported sites, the maximum water level was observed at Cherribeda (573.90 metre) site on 04.07.2006 during the reference period 2014-15. The Polavaram site reported the minimum peak water level at 28.02 metre on 16.08.1986 for the same the reference period.

2.4.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for three sites of Godavari basin (Fig 2.4.1 to Fig 2.4.12).

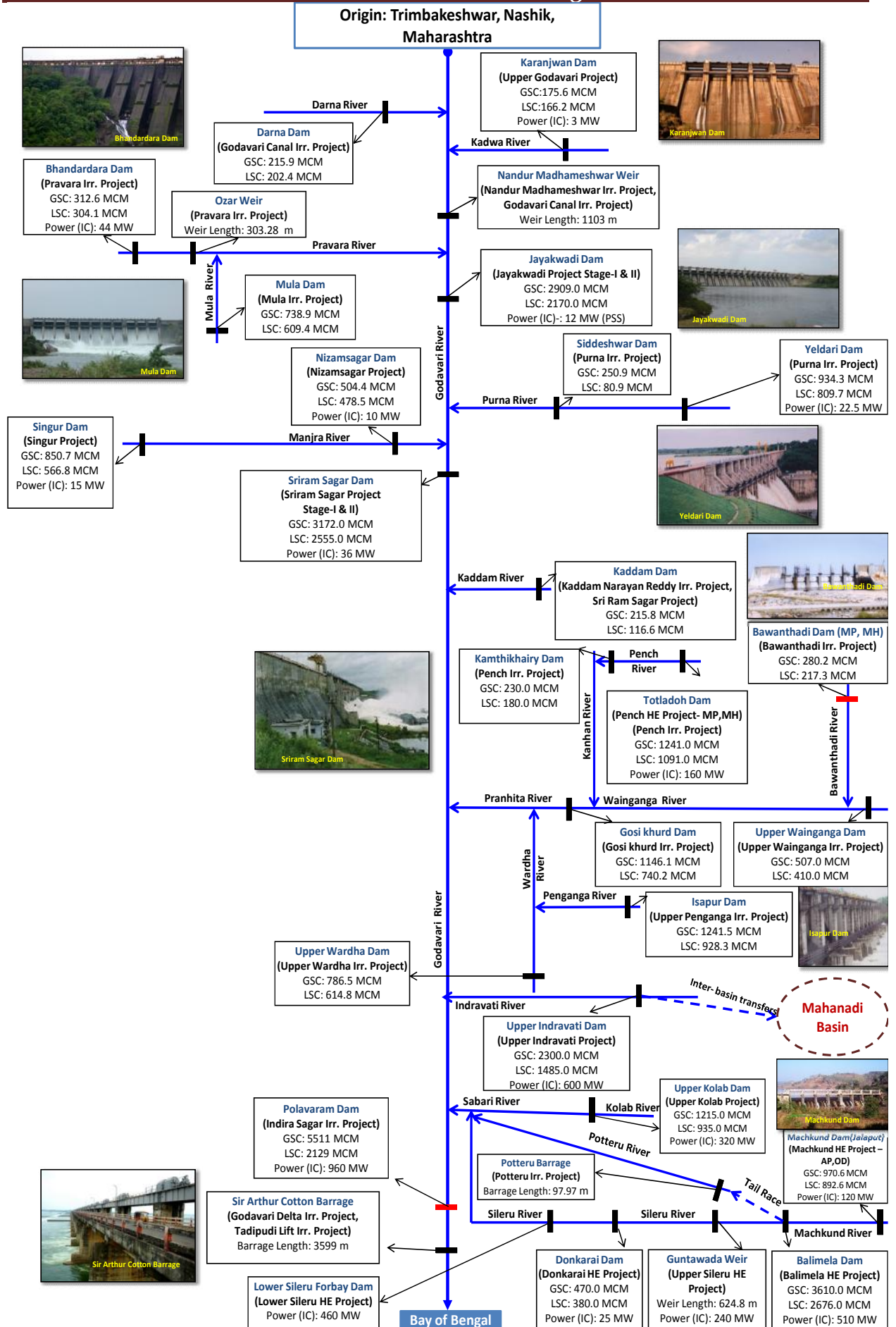




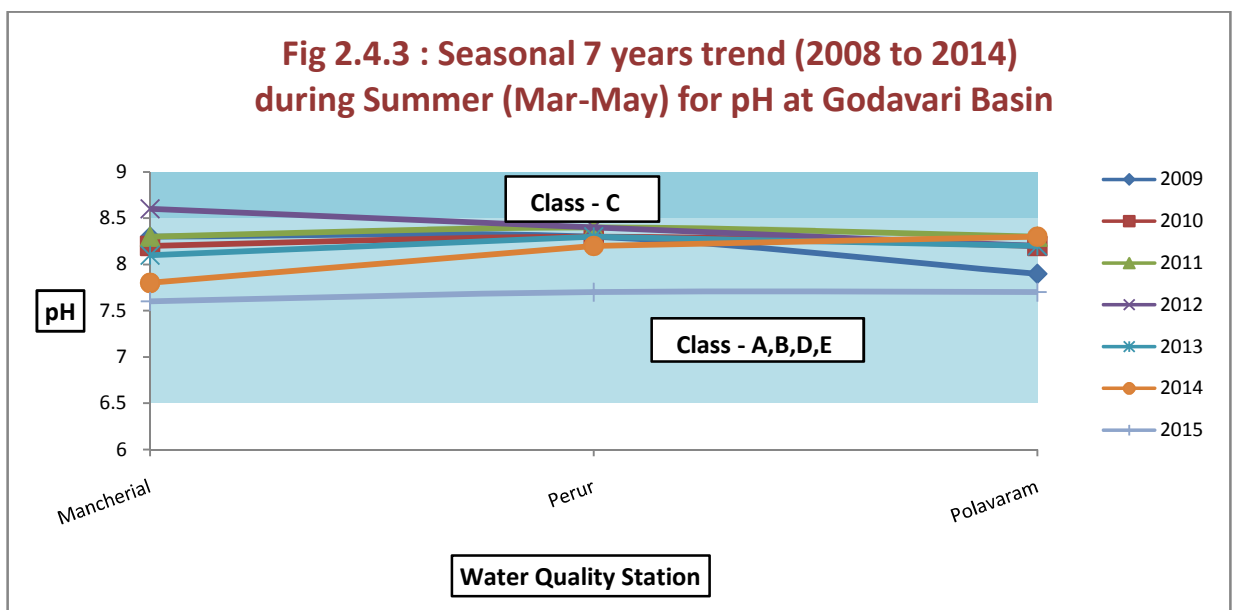
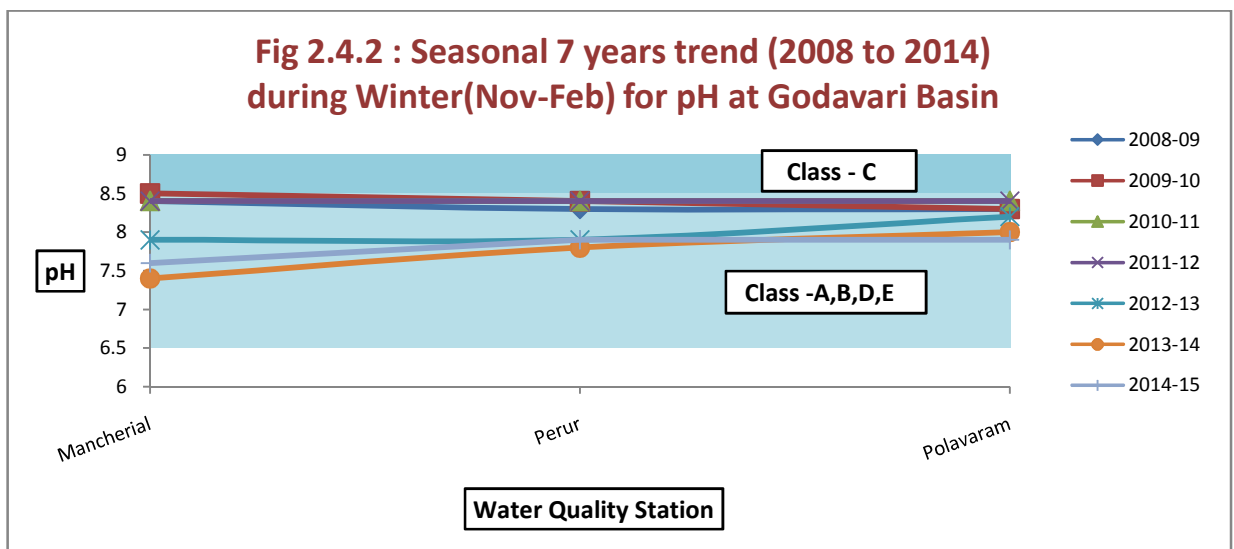
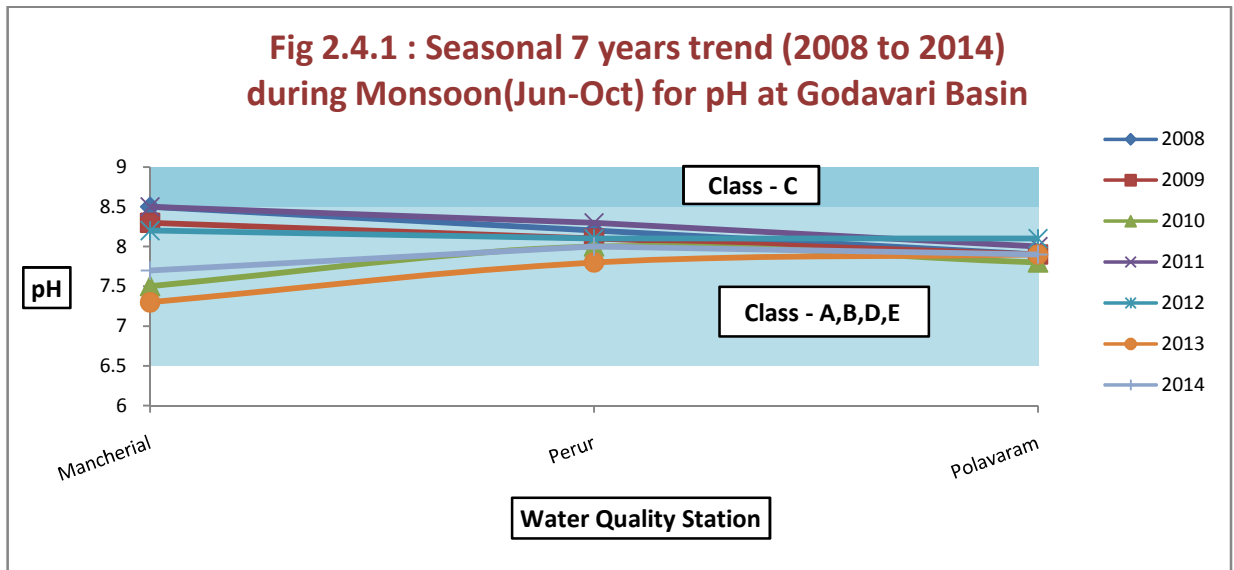
State Wise Godavari Basin Area (Sq. km)



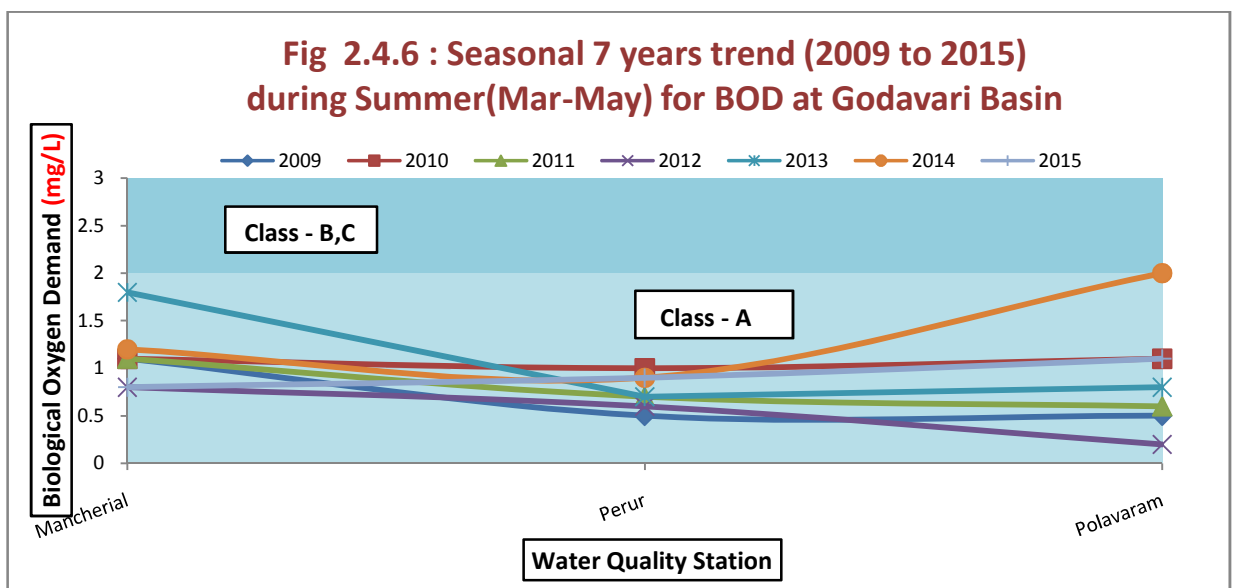
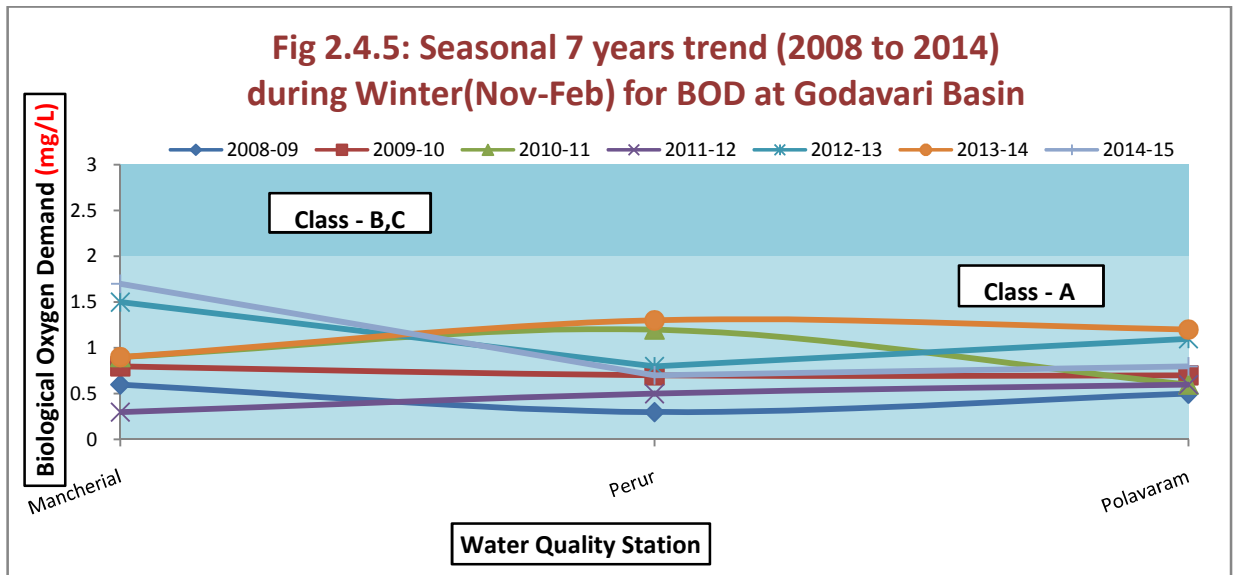
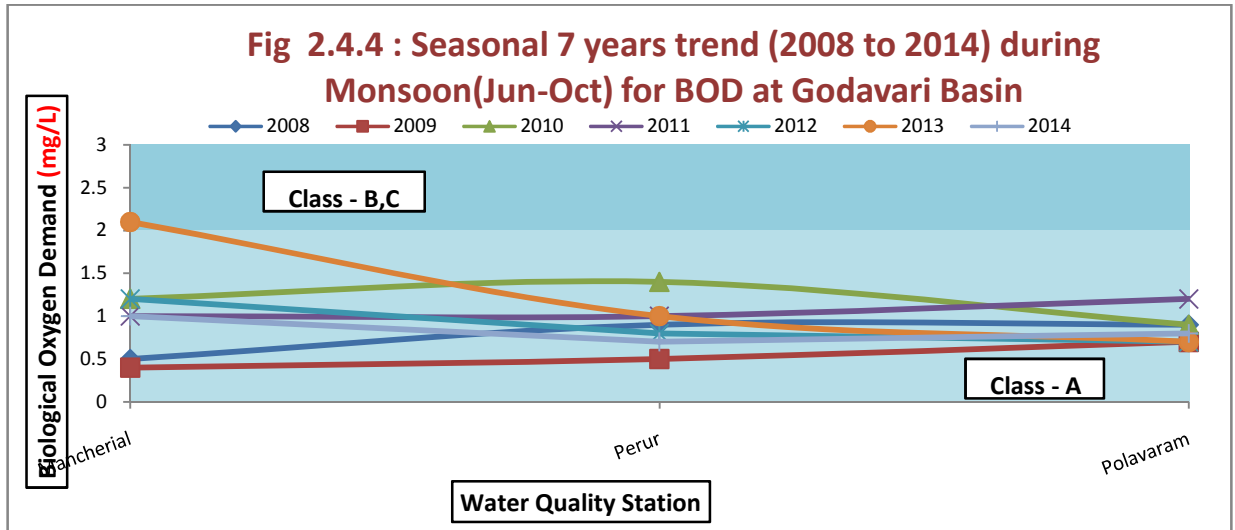
Godavari River Flow Line Diagram



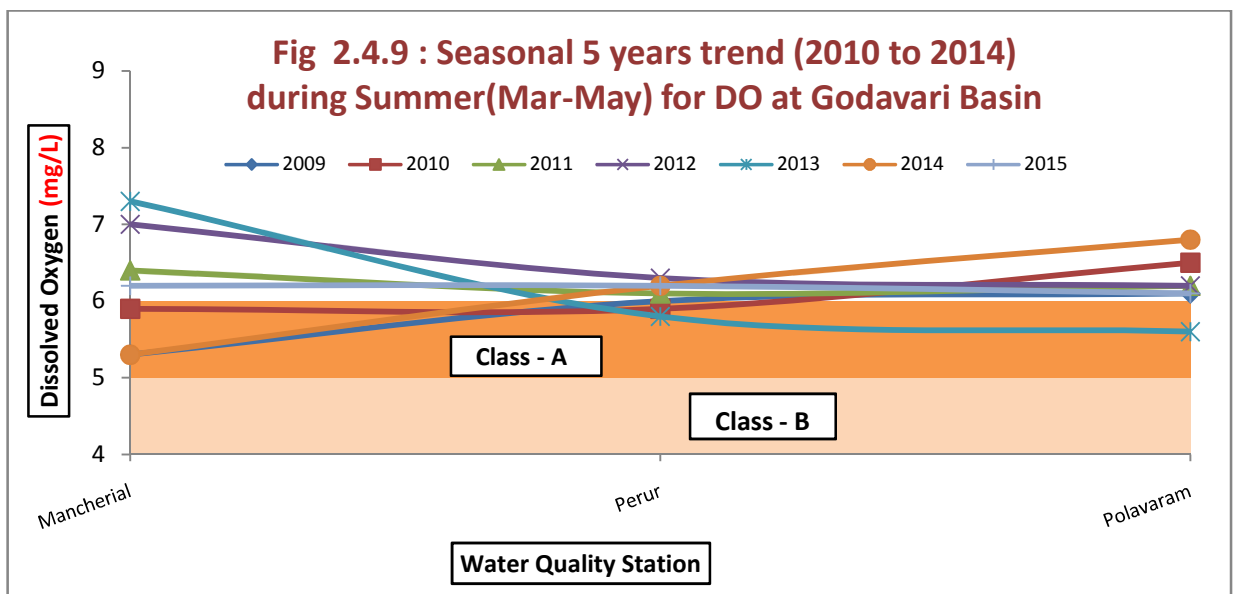
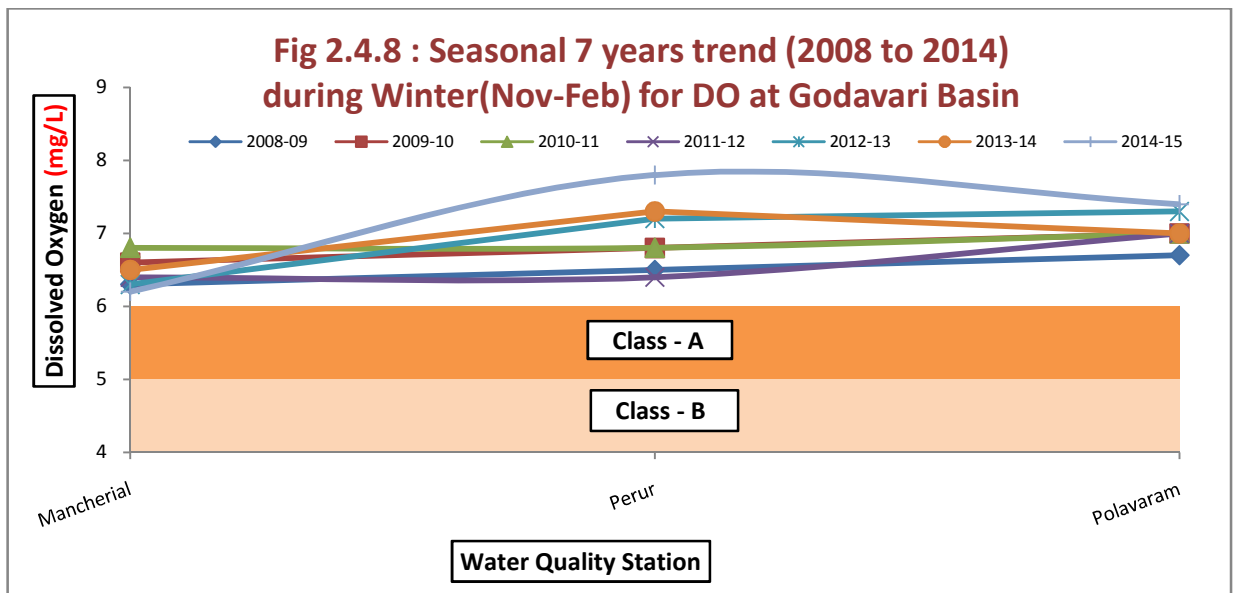
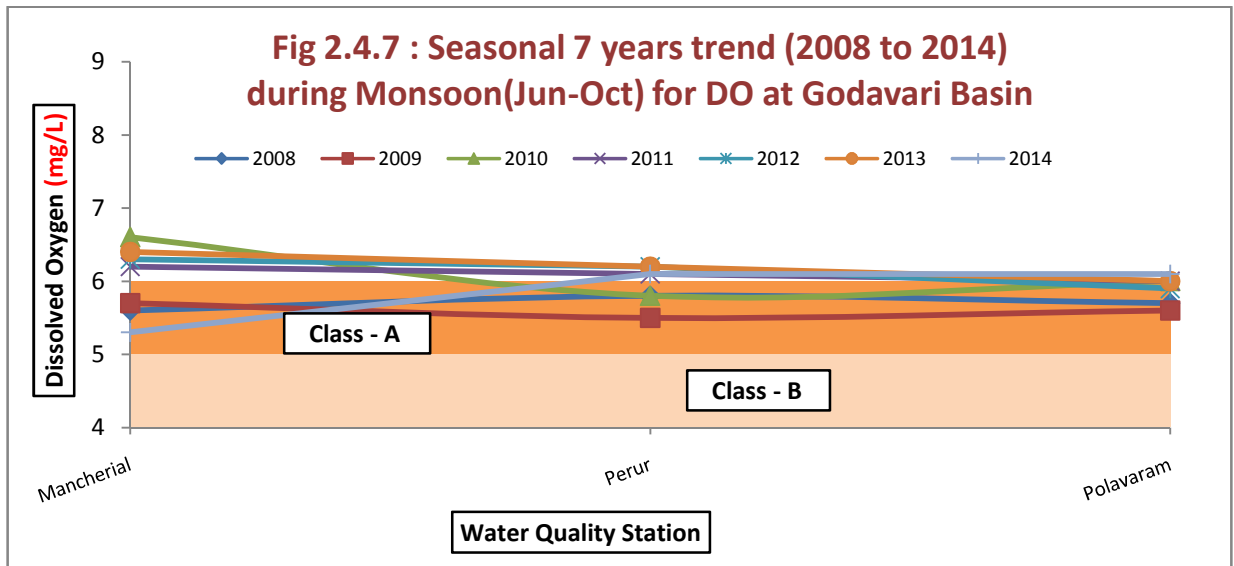
Basin: Godavari (Water Quality Parameter : pH)



Basin: Godavari (Water Quality Parameter : Biological Oxygen Demand)



Basin: Godavari (Water Quality Parameter : Dissolved Oxygen)



Basin: Godavari (Water Quality Parameter : Total Hardness)

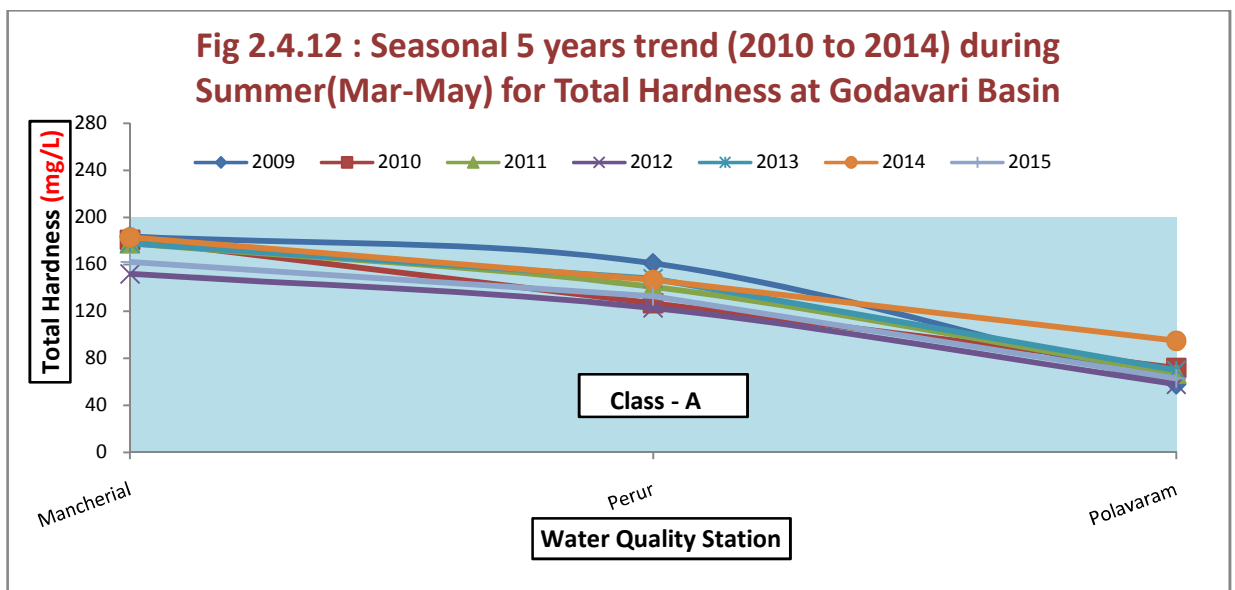
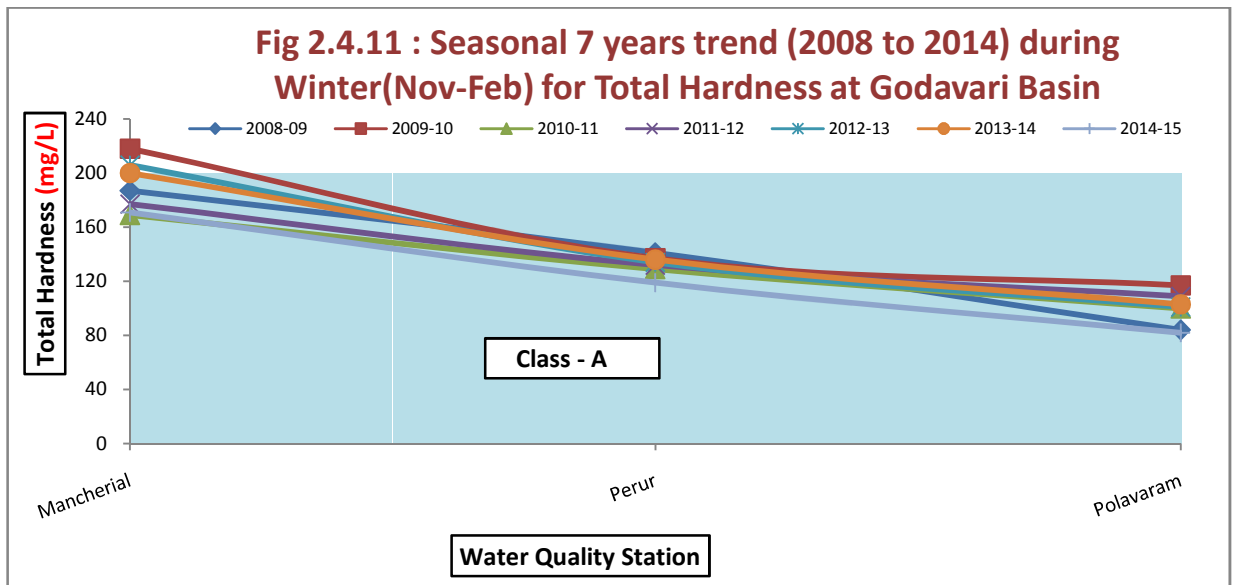
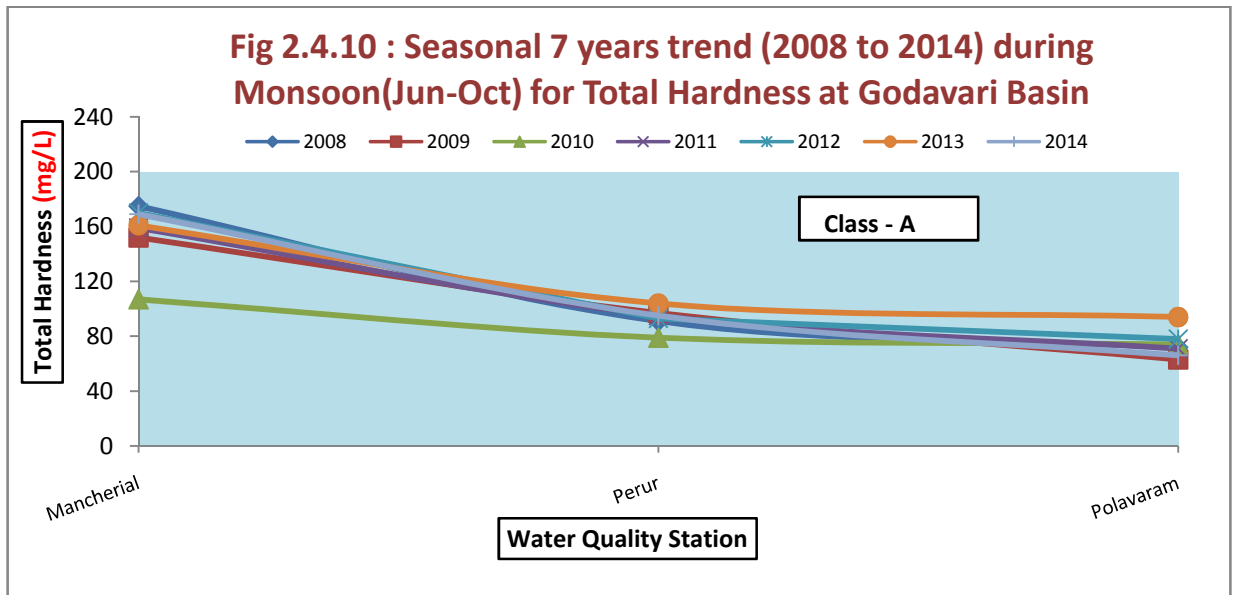
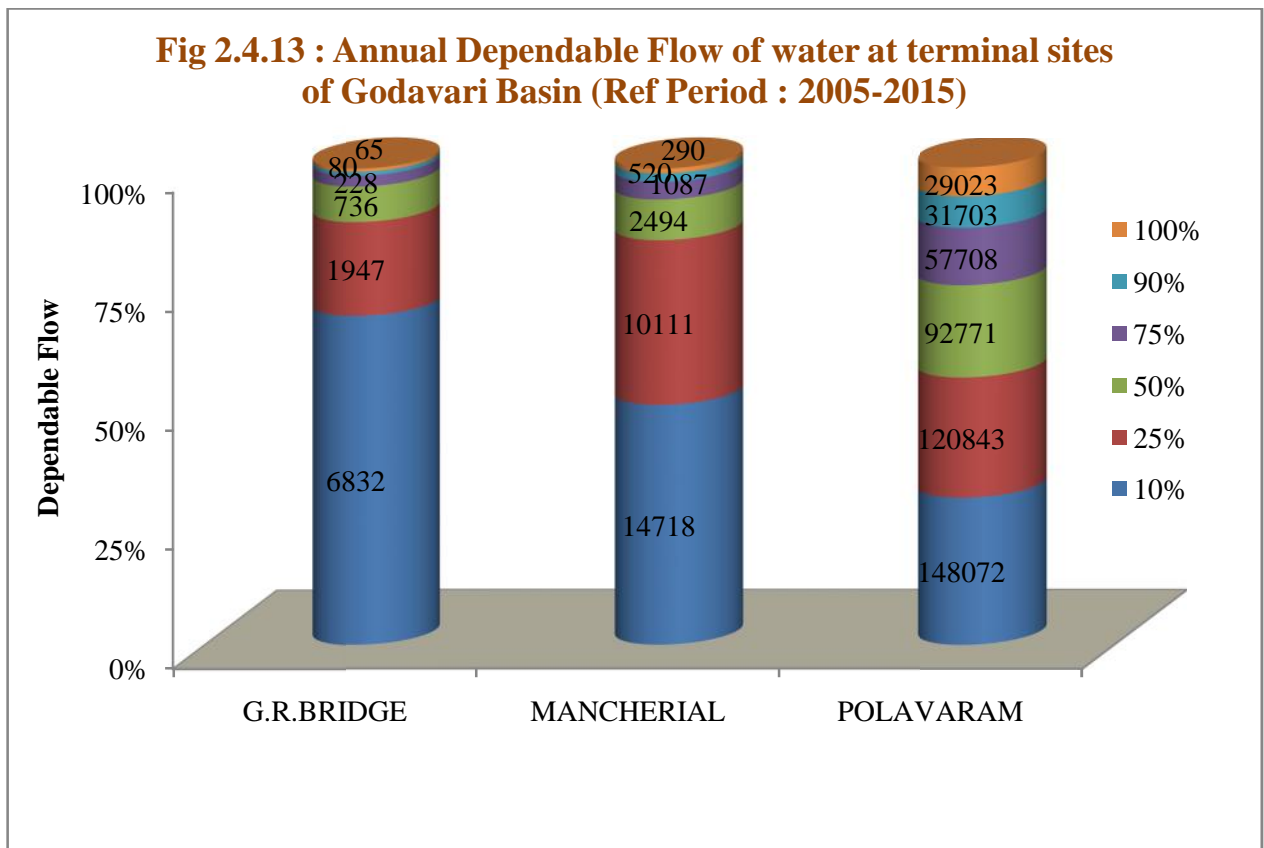


Table 2.4.1: Annual Dependable Flow Of Water at Terminal Sites Of Godavari Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	G.R.BRIDGE	6/2005 to 5/2015	6831.71	1947.06	735.53	228.35	80.34	65.00
2	MANCHERIAL		14717.86	10110.64	2493.79	1086.51	519.63	290.00
3	POLAVARAM		148072.11	120843.22	92770.97	57707.75	31702.58	29023.00

Source : SE, Godavari Circle, CWC, Hyderabad, Wainganga Division, C.GO complex, Block-C, 2nd Floor, Seminary Hills Nagpur



2.4.5 Land Use Statistics: Table 2.4.2 to Table 2.4.4 present the land use pattern, gross irrigated area and net irrigated area for Godavari basin as compared to all basins (Region-III).

TABLE 2.4.2: LAND UTILISATION PATTERN OF GODAVARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Godavari	147001.58	56155.20	16722.43	8904.40	14594.36	50625.20	13012.47	63637.66
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.4.3: GROSS AREA IRRIGATED BY SOURCES OF GODAVARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
Godavari	5692.44	451.37	6143.81	1277.86	10235.49	7593.08	17828.57	830.22
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.4.4: NET AREA IRRIGATED BY SOURCES OF GODAVARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
Godavari	3756.55	0.00	3756.55	1144.06	6610.84	5559.89	12170.73	1552.06
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.4.6 Urban Centre: Nagpur is the most important urban centre in the basin. Other important towns are Nashik, Aurangabad, Warangal, Rajahmundry, and Nizamabad.

2.4.7 Industries: A small part of the enormous forest wealth of the basin is at present utilized as timber and in the manufacture of paper and other timber products. Industries based on agricultural produce are the processing of agricultural commodities like rice milling, cotton ginning, processing, spinning and weaving, manufacture of sugar, manufacture of textiles, extraction of oil from groundnut and other oil seeds.

2.4.8 Minerals: The Godavari basin has a rich variety of mineral wealth spread over vast areas. The principal minerals found are bauxite, manganese, iron ore, Corundum and coal. Other minerals like lead, zinc, and corundum are also found in different parts of the basin.

2.5 KRISHNA BASIN

Location: The Krishna basin extends over an area of 2,58,948 Sq km out of which 26.4% is in Maharashtra, 43.8% is in Karnataka and 29.8% falls in erstwhile Andhra Pradesh. The basin lies between east longitudes $73^{\circ} 17'$ to $81^{\circ} 9'$ and north latitudes $13^{\circ} 10'$ to $19^{\circ} 22'$ in the Deccan plateau. The Krishna rises in the Western Ghats at an altitude of 1337 metre just north of Mahabaleshwar, about 64 km from the Arabian Sea and flows from west to east through the States of Maharashtra, Karnataka and erstwhile Andhra Pradesh to join the Bay of Bengal. The total length of the river from the sources to its outfall in the sea is about 1,401 km of which 612 km are in erstwhile Andhra Pradesh, 306 km in Maharashtra and 483 km in Karnataka. Together with its tributaries, the river drains about 708 km of the Western Ghats, which is its chief source of supply. The Ghataprabha, the Malaprabha, the Bhima, the Tungabhadra, Munneru and Musi are the principal tributaries. The Krishna basins' predominant land use is agriculture.

The Krishna basin is bounded in the north by the ridge separating it from the Godavari basin in the south and in east by the Eastern Ghats and in the west by the Western Ghats. The basin is roughly triangular in shape with its base along the Western Ghats, the apex at Vijayawada and the Krishna itself forming the median. All the major tributaries draining the base of the triangle fall into the river in the upper two-thirds of its length.

The Krishna river rises in the western Ghats at an altitude of 1337 metre just north of Mahabaleswar, about 64 km. from the Arabian Sea and flows from west to east through the States of Maharashtra, Karnataka and erstwhile Andhra Pradesh before it joins the Bay of Bengal downstream of Vijayawada.

There are about 13 major tributaries which join river Krishna along its 1400 km. course, out of which six are right bank tributaries and seven are left bank tributaries. Among the major tributaries, the Ghataprabha, the Malaprabha and the Tunga Bhadra are the principal right bank tributaries which together account for 35.45% of the total catchment whereas the Bhima, the Musi and the Munneru are the principal left bank tributaries which together account for 35.62% of the total catchment area.

The average annual rainfall in the Krishna basin is 784 mm. The South West Monsoon sets in by middle of June and withdraws by the middle of October. About 90% of annual rainfall is received during the Monsoon months, of which more than 70% occurs during July, August and September.

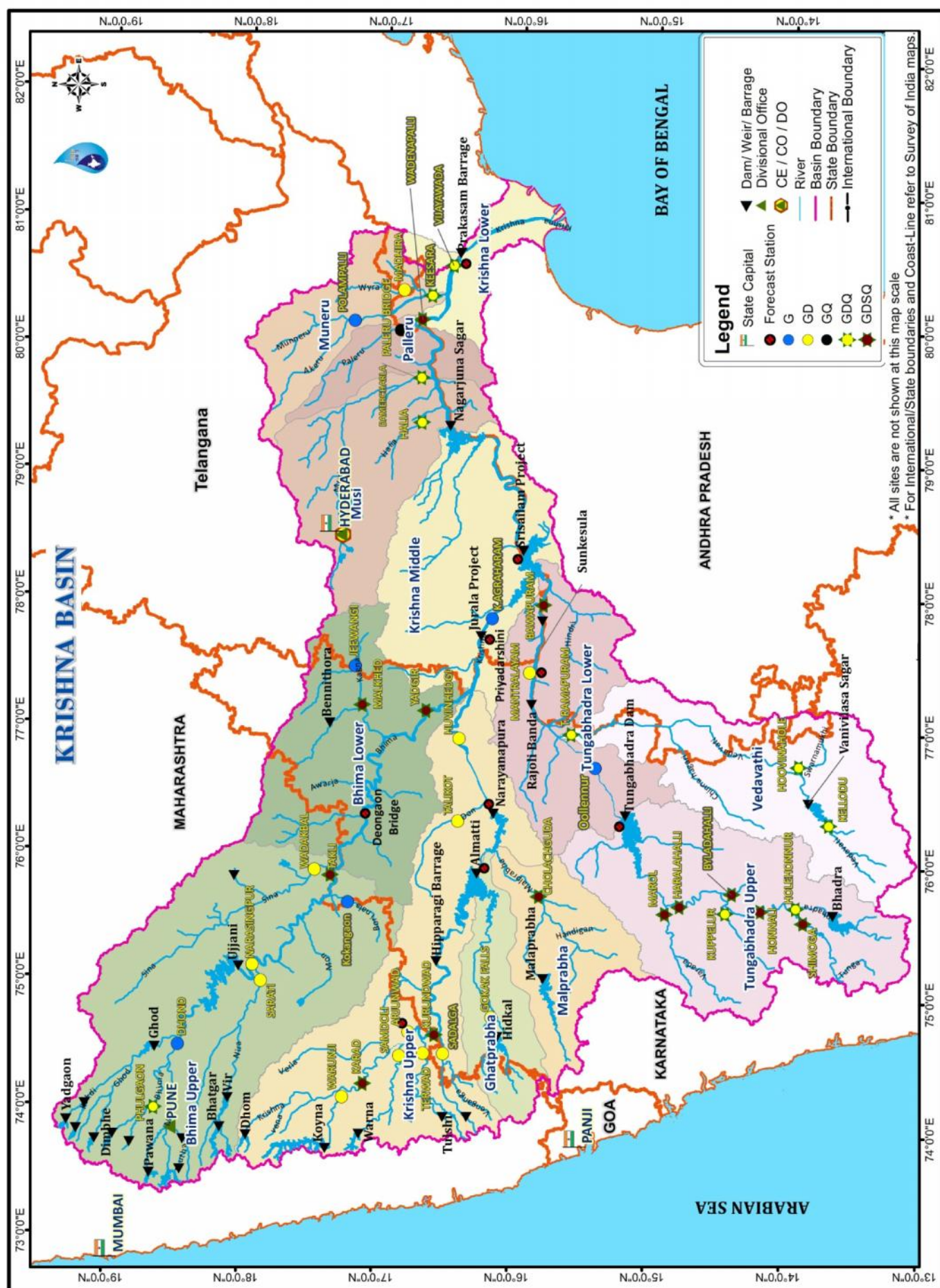
Though few major projects like Krishna delta were in existence prior to independence, planned development of water resources of Krishna basin took place after independence. The completed important major projects in Krishna basin are Koyna and Ujjani projects in Maharashtra state.

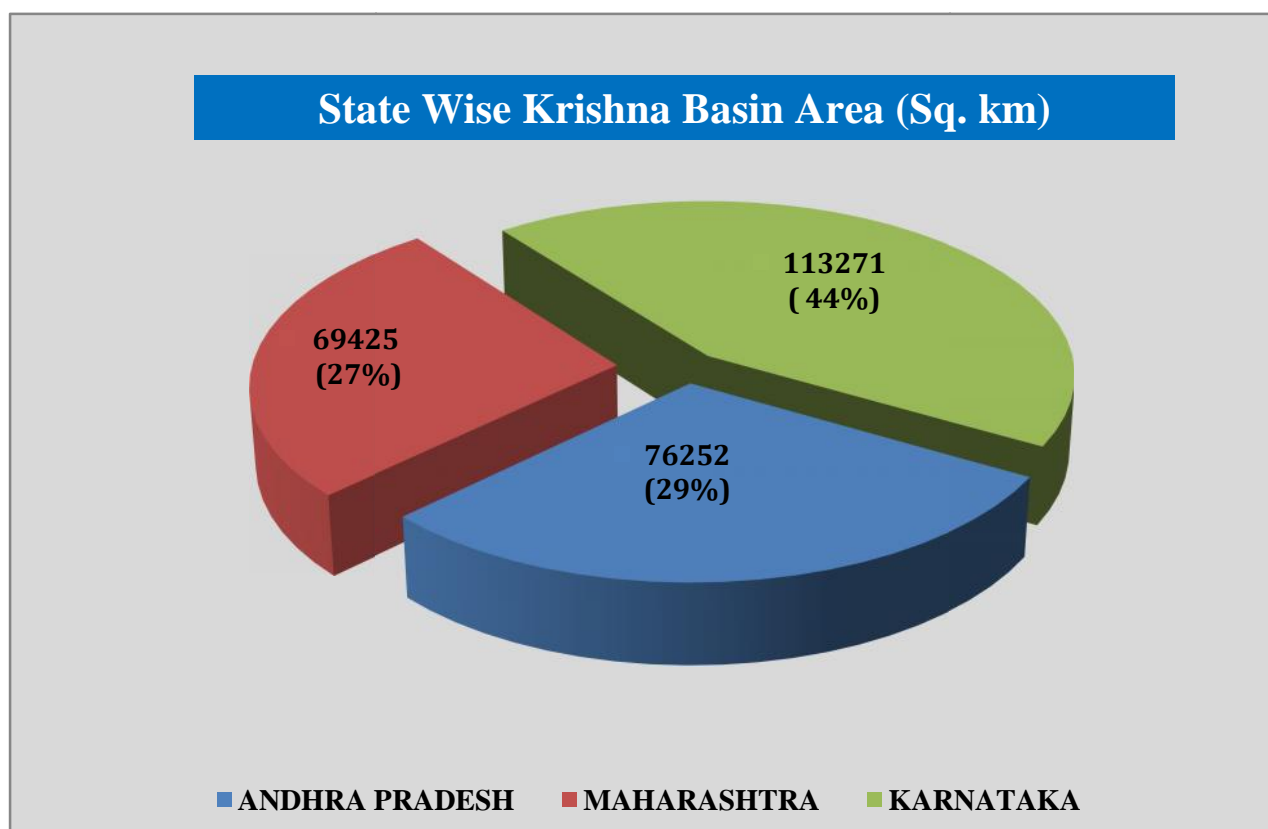
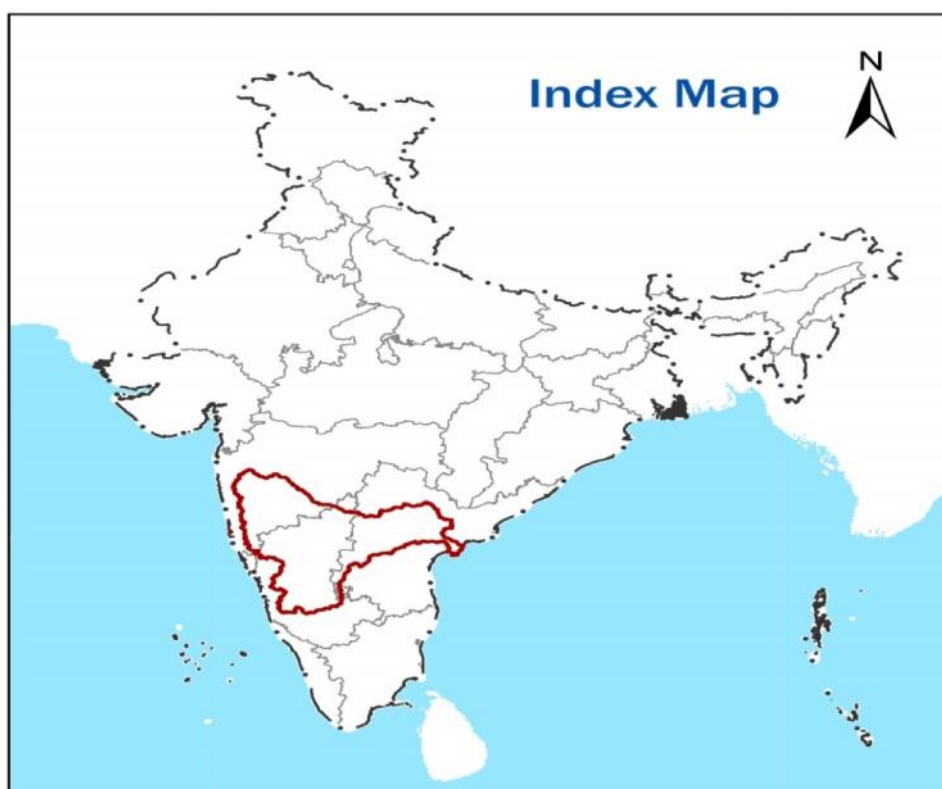
2.5.1 Irrigation projects: Radhanagari, Ghod, Almatti Dam, Khadakwasla, Vir Dam, Koyna, Tungabhadra, Bhadra, Musi Project, Nagarjuna Sagar, Srisailem, P.D.Jurala and Prakasam Barrage are the major projects in the catchment areas of the river basin.

2.5.2 Hydrological Observation Sites: As per 2014-15 data, there are 52 Hydrological observation stations in the basin. Sediment observations are made at 14 of these stations. In addition, gauge (all sites), discharge (36 sites) observations are also made in these stations.

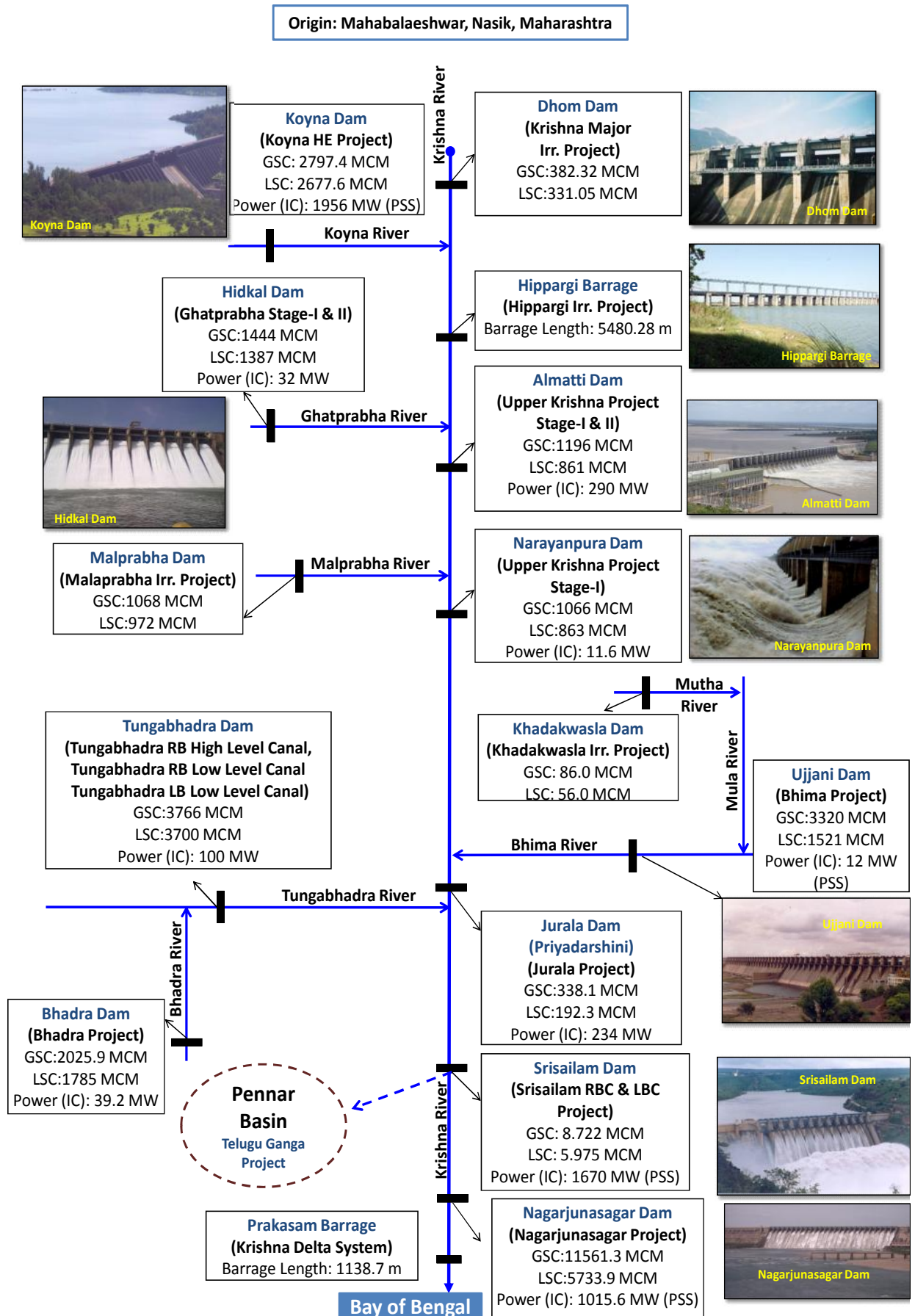
2.5.3 Peak Water Level: It has 38 sites in all for hydrological observations. Among these sites, peak water level varied from 19.27 metre at Vijaywada site (minimum) to 650.25 metre at Kellodu site (maximum) during the reference period 2014-15.

2.5.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for three sites of Krishna basin (Fig 2.5.1 to Fig 2.5.8).

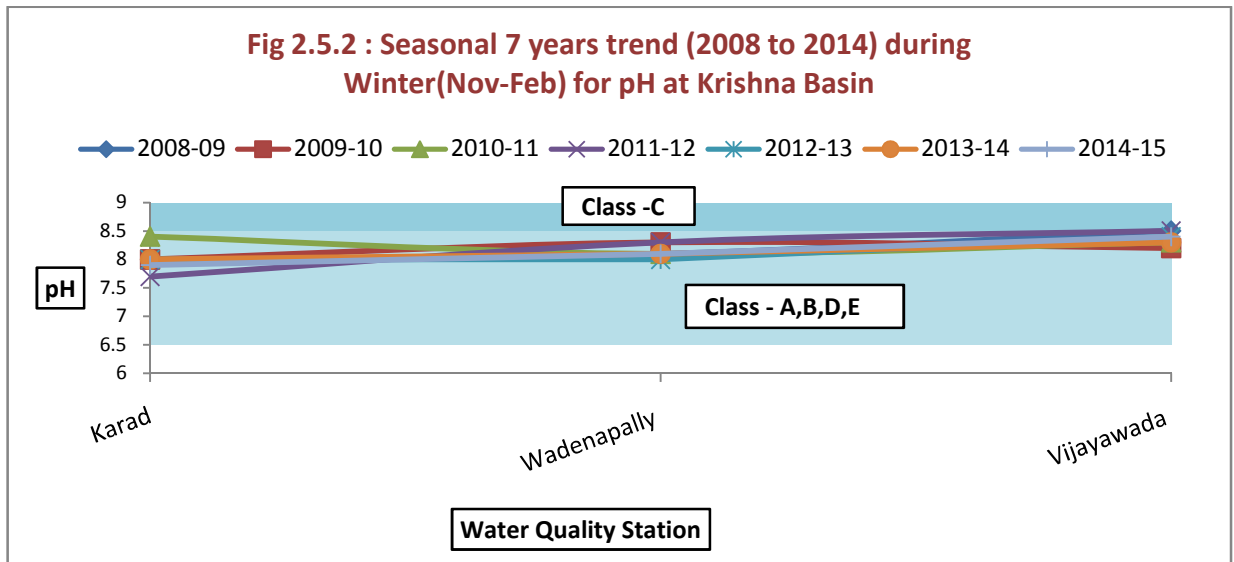
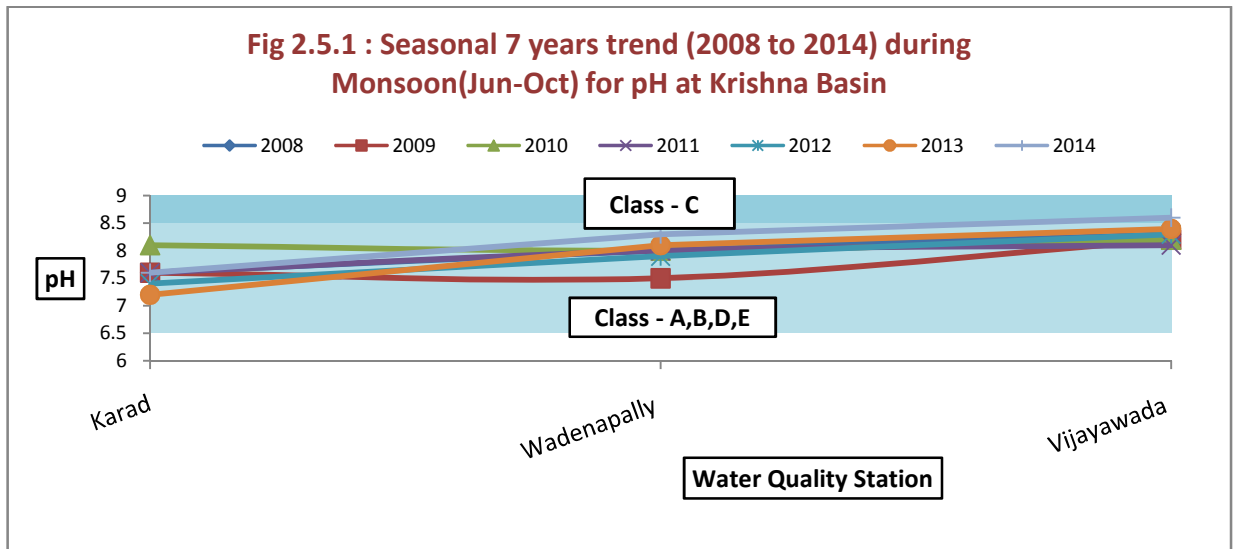




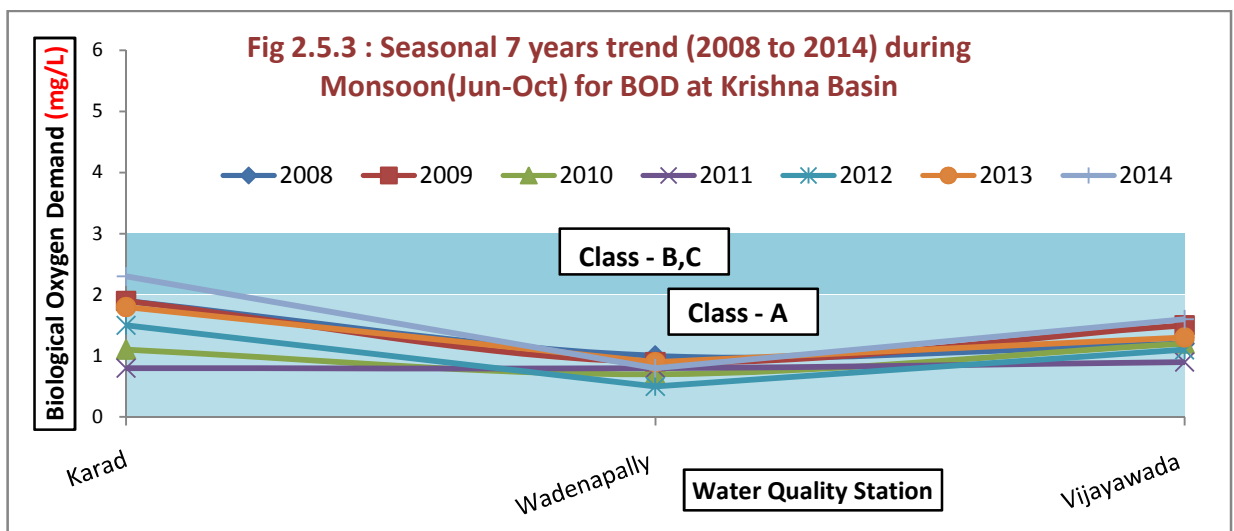
Krishna River Flow Line Diagram

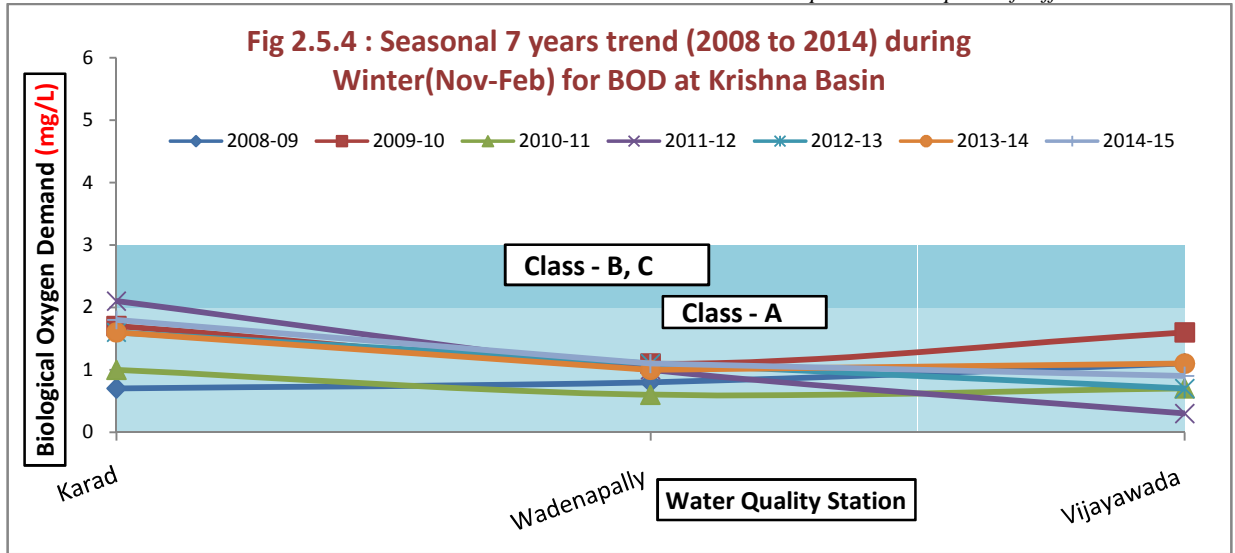


Basin: Krishna (Water Quality Parameter : pH)

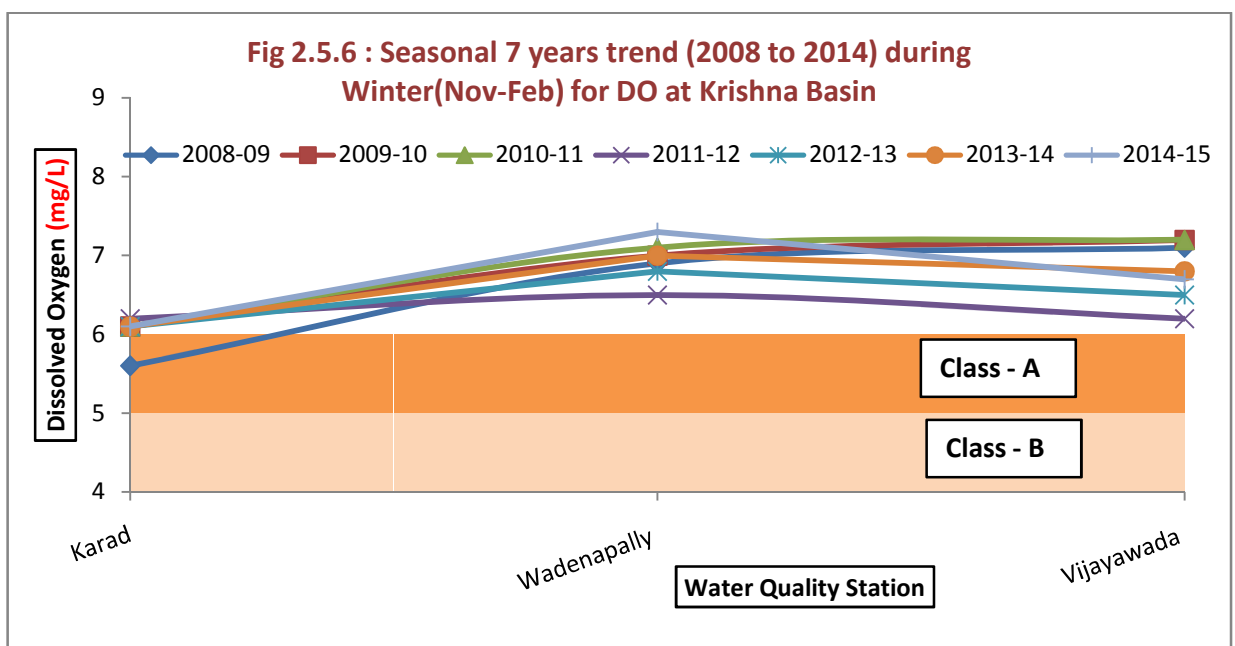
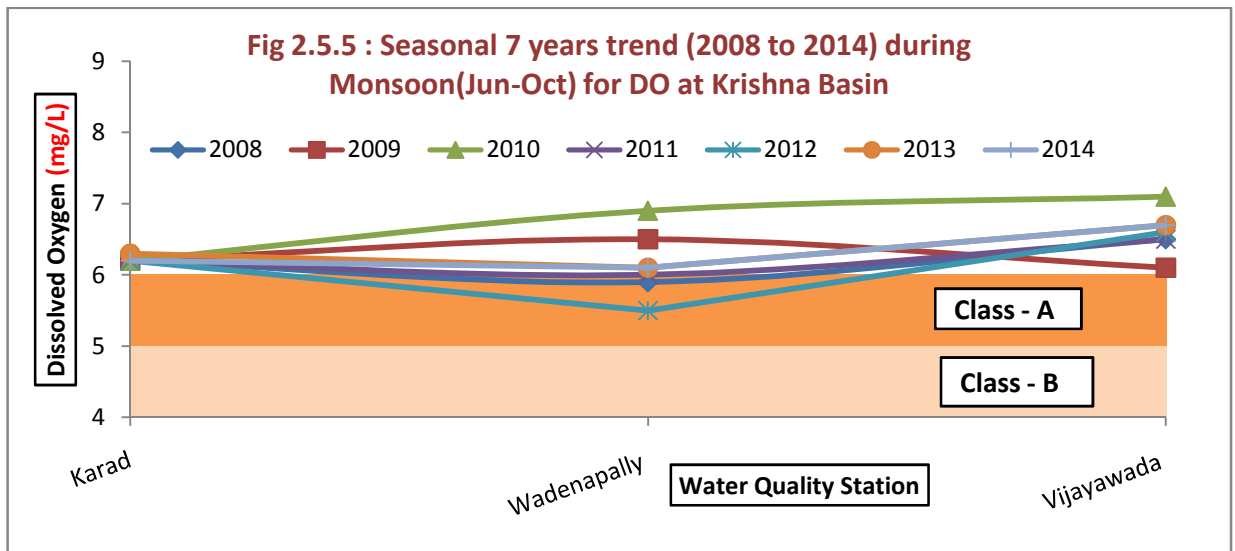


Basin: Krishna (Water Quality Parameter : Biological Oxygen Demand)





Basin: Krishna (Water Quality Parameter : Dissolved Oxygen)



Basin: Krishna (Water Quality Parameter : Total Hardness)

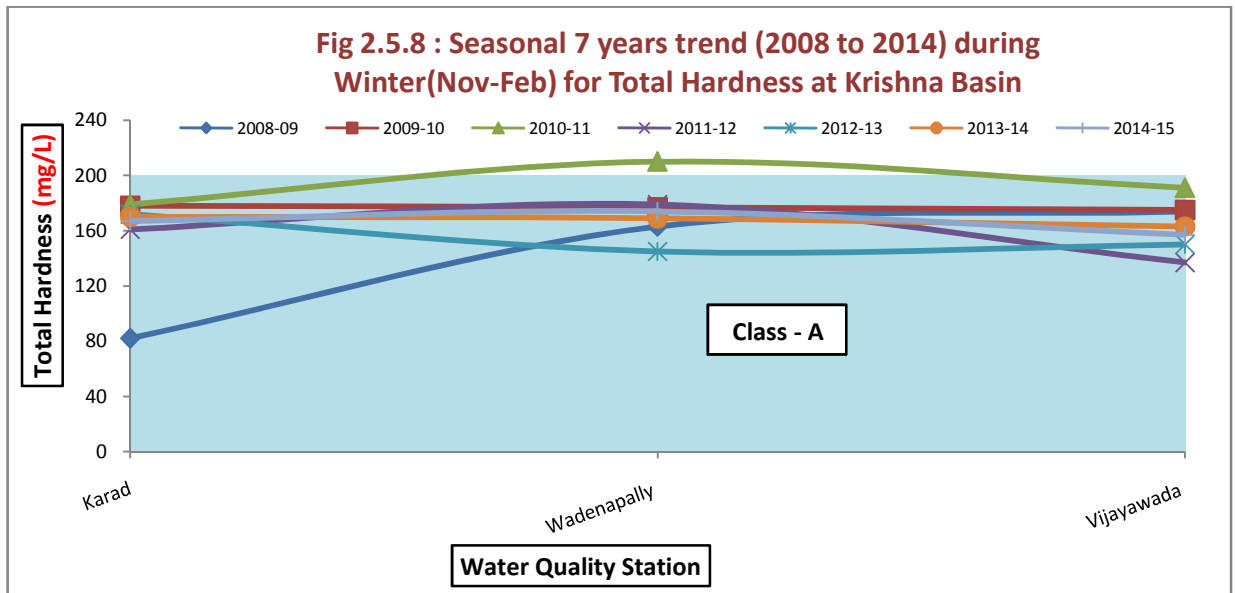
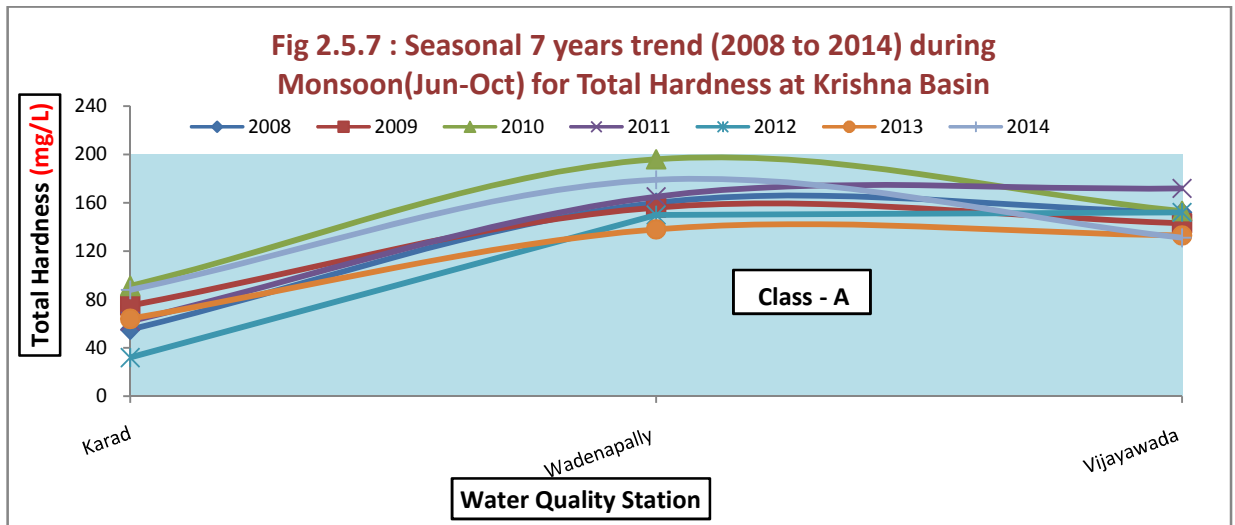
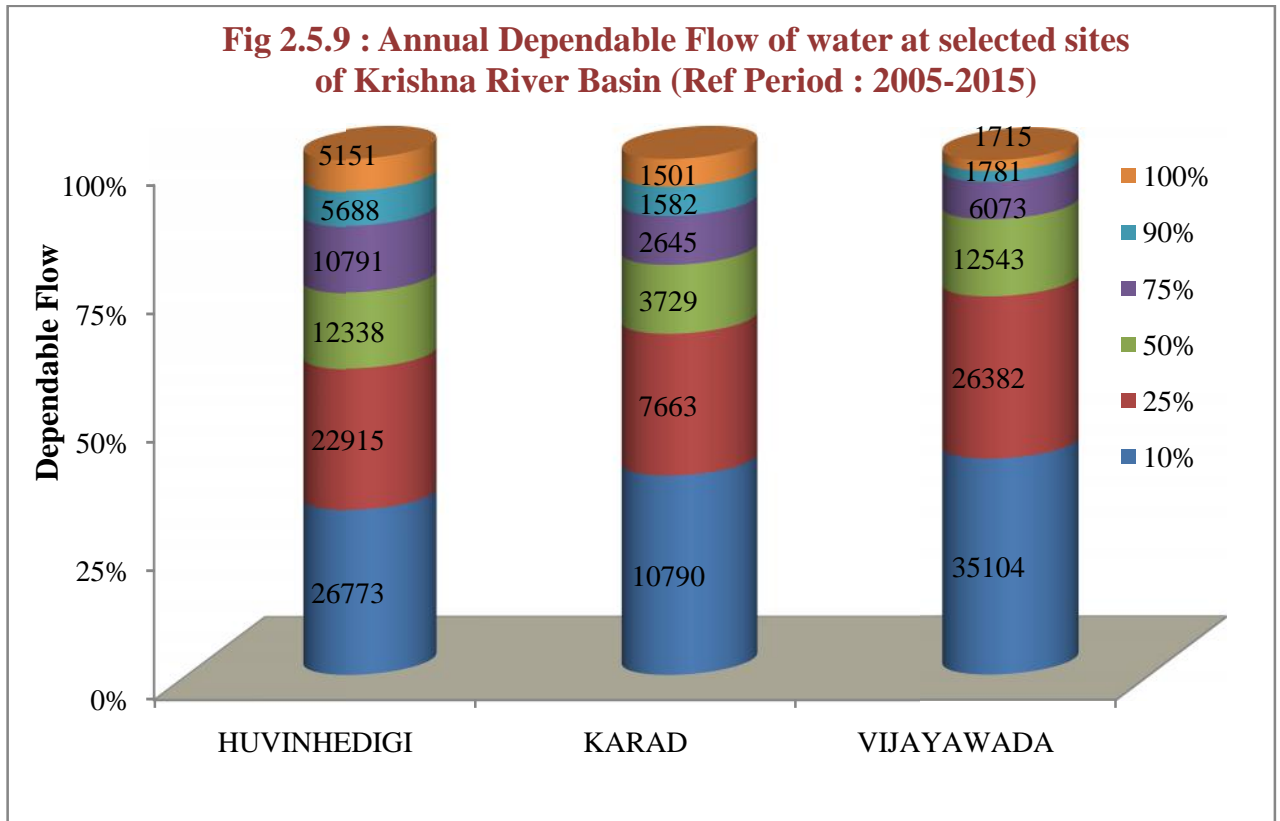


Table 2.5.1: Annual Dependable Flow of Water at Terminal Sites of Krishna Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	HUVINHEDIGI	6/2005 to 5/2015	26772.73	22914.63	12338.09	10791.41	5688.38	5150.87
2	KARAD		10789.72	7662.52	3728.55	2644.87	1581.53	1500.74
3	VIJAYAWADA		35104.43	26381.67	12543.37	6072.70	1780.53	1714.70

Source : SE, Godavari Circle, Central Water Commission, Hyderabad, Krishna Basin



2.5.5 Land Use Statistics: Table 2.5.2 to Table 2.5.4 present the land use pattern, gross irrigated area and net irrigated area for Krishna basin as compared to all basins (Region-III).

TABLE 2.5.2: LAND UTILISATION PATTERN OF KRISHNA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Krishna	189433.02	23456.37	22241.92	11140.59	29142.05	103452.10	22800.47	126252.56
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.5.3: GROSS AREA IRRIGATED BY SOURCES OF KRISHNA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)									
Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Krishna	17080.57	0.00	17080.57	1448.20	20797.10	4418.05	25215.15	5314.95	49058.86
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.5.4: NET AREA IRRIGATED BY SOURCES OF KRISHNA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

BASINS (REGION III) DURING 2014-15 (AREA IN SQ. KM.)									
Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Krishna	14007.97	0.00	14007.97	1272.07	16388.60	3646.89	20035.49	4663.95	39979.47
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.5.6 Urban Centres: The major cities in the basin are Pune, Hyderabad & Vijayawada.

2.5.7 Industries: The main industries in the catchment are Textiles, Sugar, Chemical, Cement factories, Automobiles, Engineering goods, Nuclear energy related.

2.5.8 Minerals: The important minerals found in the catchment are gold, bauxite, lime stone, iron ore, manganese ore, quartz, copper, red oxide, soapstone, etc.

2.6 CAUVERY BASIN

Location: The Cauvery river originates at Talakaveri in Coorg District of Karnataka in Brahmagiri Range of hills in the Western Ghats at an elevation of 1,341 metre and drains a total of 81,155 Sq km area of which 34,273 Sq km lies in Karnataka, 43,856 sq km in Tamil Nadu, 2,866 sq km in Kerala and 160 sq km in the Union Territory of Puducherry. The basin lies between east longitudes $75^{\circ} 27'$ to $79^{\circ} 54'$ and north latitudes $10^{\circ} 9'$ to $13^{\circ} 30'$. The Cauvery basin is bounded by Tungabhadra sub-basin of Krishna basin in the northern side and Palar sub-basin in the southern side. The Western Ghats form the western boundary. The Nilgiris, an offshore of Western Ghats, extend eastwards to the Eastern Ghats and divide the basin into two natural and political regions i.e. Karnataka plateau in the north and the Tamil Nadu plateau in the south. In Tamil Nadu, the eastern part of the basin is in the elevation range of 0 to 150 metre sloping gently up from the sea.

At Shivanasamudram, the river branches off into two parts and falls through a height of 91 metre. in a series of falls and rapids. The falls at this point is utilised for power generation. The power station at Shivanasamudram was built as early as 1902. The two branches of the river join after the falls and flows through a wide gorge which is known as "Mekedatu" (Goats leap) and continues its journey and forms the boundary between Karnataka and Tamil Nadu States for a distance of 64 kms. At Hogennekkal Falls, it takes southernly direction and enters the Mettur Reservoir, which was constructed in 1934. A tributary called Bhavani joins Cauvery on the right bank about 45 kms below Mettur Reservoir, thereafter it takes easternly course to enter the plains of Tamil Nadu. Two more tributaries Noyyal and Amaravathi join on the right bank and here the river widens with sandy bed and flows as "Akhandau Cauvery".

Immediately after crossing Tiruchirappalli district, the river divides into two parts, the northern branch being called "The Coleroon" and southern branch remains as Cauvery and from here the Cauvery Delta begins. After flowing for about 16 kms, the two branches join again to form "Srirangam Island". On the Cauvery branch lies the "Grand Anicut" said to have been constructed by a Chola King in 2nd Century AD. Below the Grand Anicut, the Cauvery branch splits into two, Cauvery and Vennar. These branches divide and sub-divide into small branches and form a network all over the delta.

The total length of the river from the origin to its outfall into the sea is 800 kms of which 320 kms is in Karnataka, 416 kms in Tamil Nadu and 64 kms forms the common border between the Karnataka and Tamil Nadu states. The Cauvery basin is fan shaped in Karnataka and leaf shaped in Tamil Nadu. The run-off does not drain off quickly because of its shape and therefore no fast rising floods occur in the basin. In the Cauvery basin, four distinct seasons occur viz. (i) Cold weather, (ii) Hot weather, (iii) South West Monsoon and (iv) North-East Monsoon. The basin is mainly influenced by South-West Monsoon in Karnataka & Kerala and North-East Monsoon in Tamil Nadu.

The Cauvery river system consists of 21 principal tributaries each with catchment area exceeding 250 sq km. The largest of all of them are the Catchment Area Shimsha, lying wholly in Karnataka, the Amaravathi rising in Kerala but lying mostly in Tamil Nadu and the Kabini rising in both Kerala and Tamil Nadu but lying mostly in Karnataka. The Bhavani is the fourth largest and the second longest. It rises in Kerala and Karnataka but lies mostly in Tamil Nadu. The longest tributary, the Hemavathi (245 kms) is the fifth largest river in catchment area and lies wholly in Karnataka. From the point of view of flow contribution to the system, apart from the head reach of the Cauvery main, the most important tributaries are i) the Hemavathi, ii) the Kabini and iii) the Bhavani.

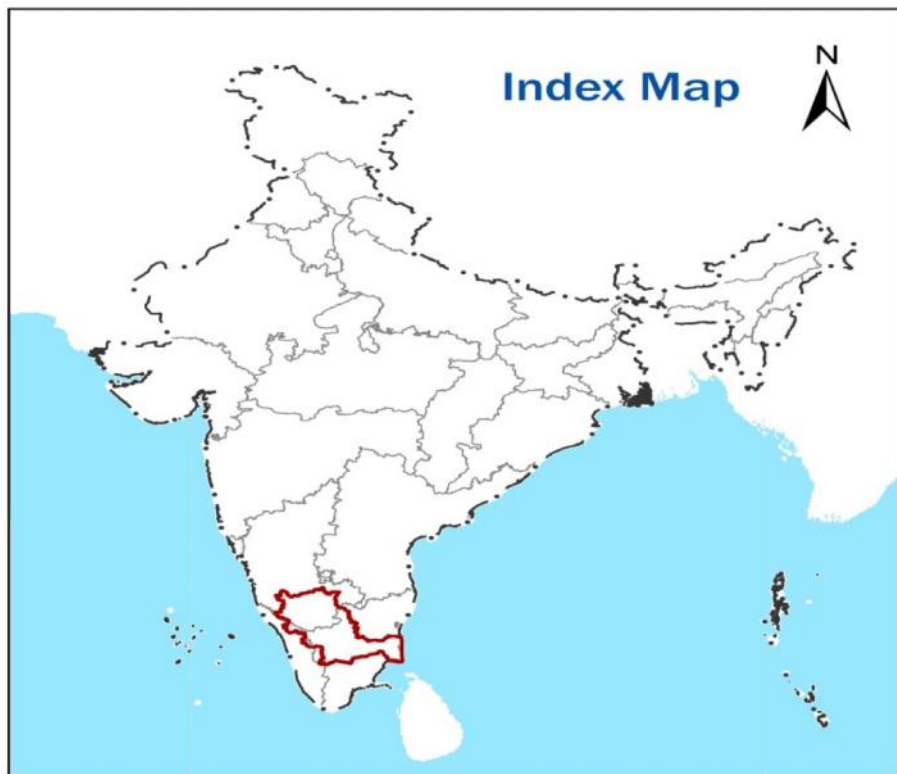
2.6.1 Irrigation Projects: Krishnaraja Sagar Dam, Bhavani Sagar Dam, Hemavathi Dam, Grand Anicut, Lower Coleroon Anicut, Kabini Dam, Harangi Dam and Mettur Dam are the major projects in the catchment areas of the river basin.

2.6.2 Hydrological Observation Sites: There are 34 H.O. sites in the basin out of which monitoring of gauge & water quality are measured at all sites, sediment observations at 15 sites.

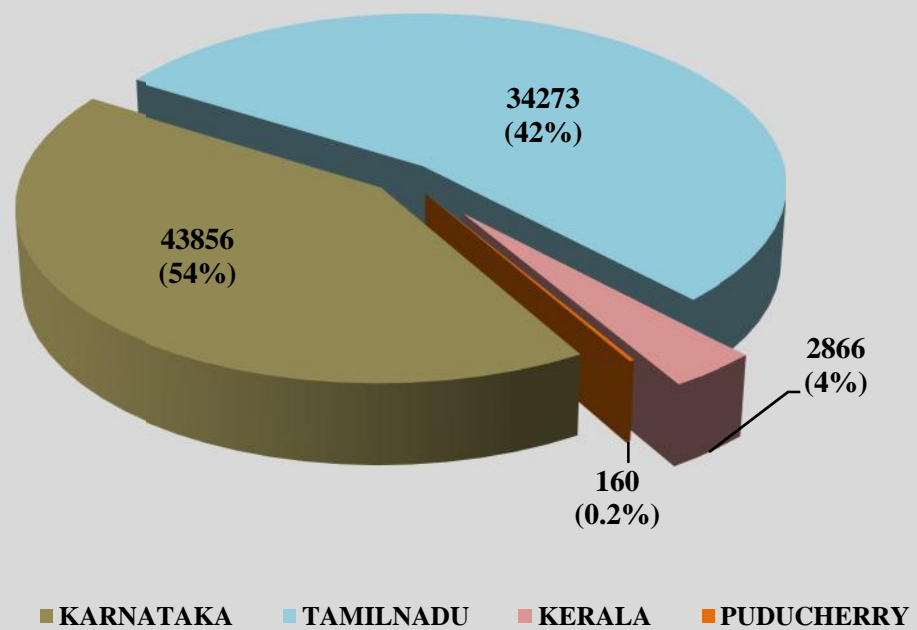
2.6.3 Peak Water level: : In Cauvery basin, it is remarkable to note that four sites i.e. MH Halli, Thimmanahalli, Sakleshpur and Kudige out of 35 reported sites have registered peak water level above 800 metre. The peak water level has increased with the increase in the value of latitude with some exceptional cases.

2.6.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for seven sites of Cauvery basin (Fig 2.6.1 to Fig 2.6.12).

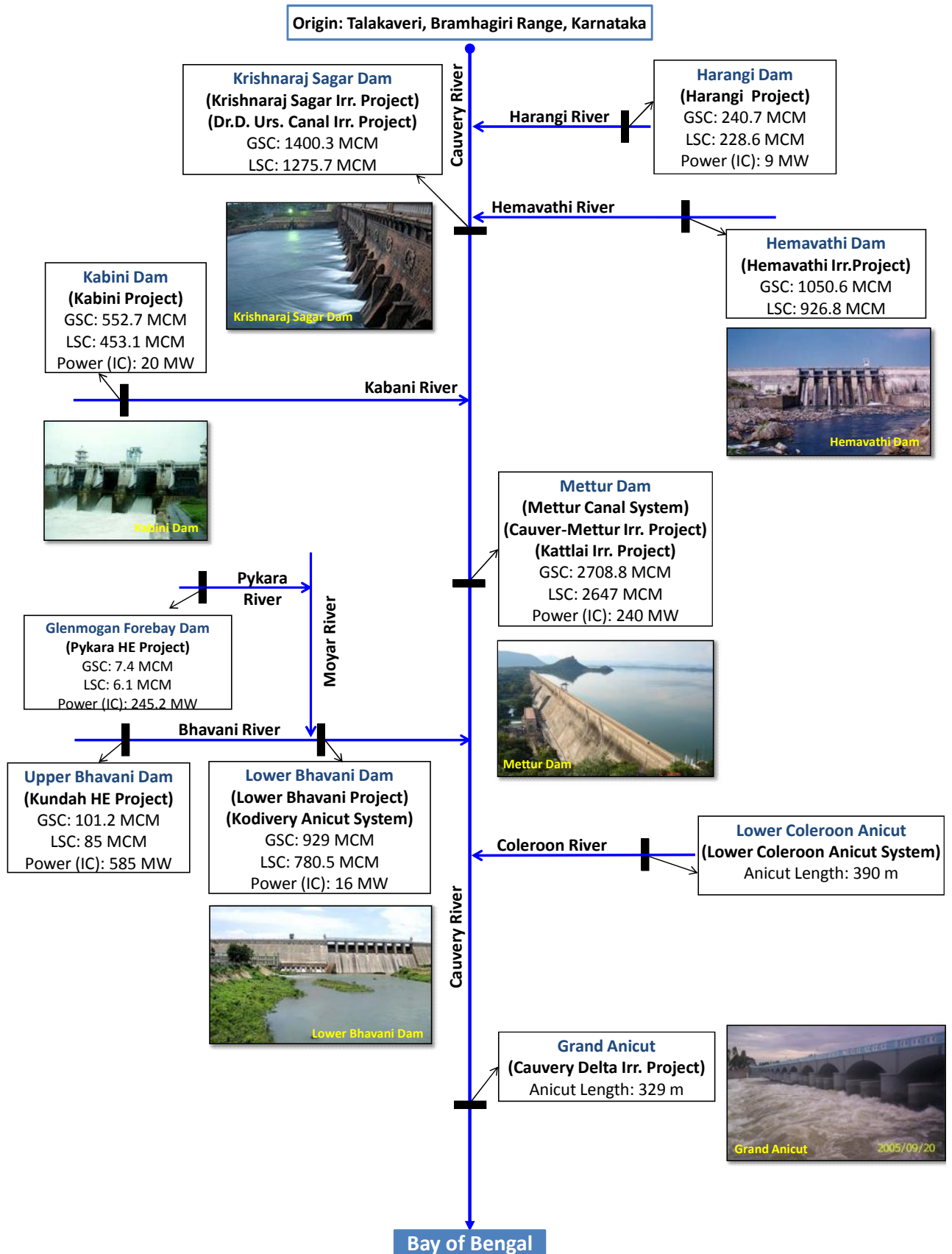




State Wise Cauvery Basin Area (Sq.km)



Cauvery River Flow Line Diagram



River Basin: Cauvery (Water quality Parameter : pH)

Fig 2.6.1 : Seasonal 7 years (2008 to 2014) trend during Monsoon(Jun-Oct) for pH at Cauvery basin

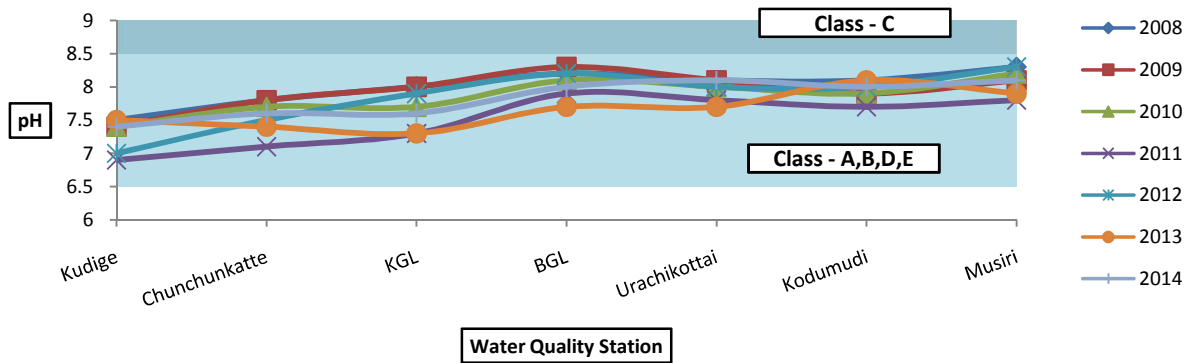


Fig 2.6.2 : Seasonal 7 years (2008 to 2015) trend during Winter(Nov-Feb) for pH at Cauvery basin

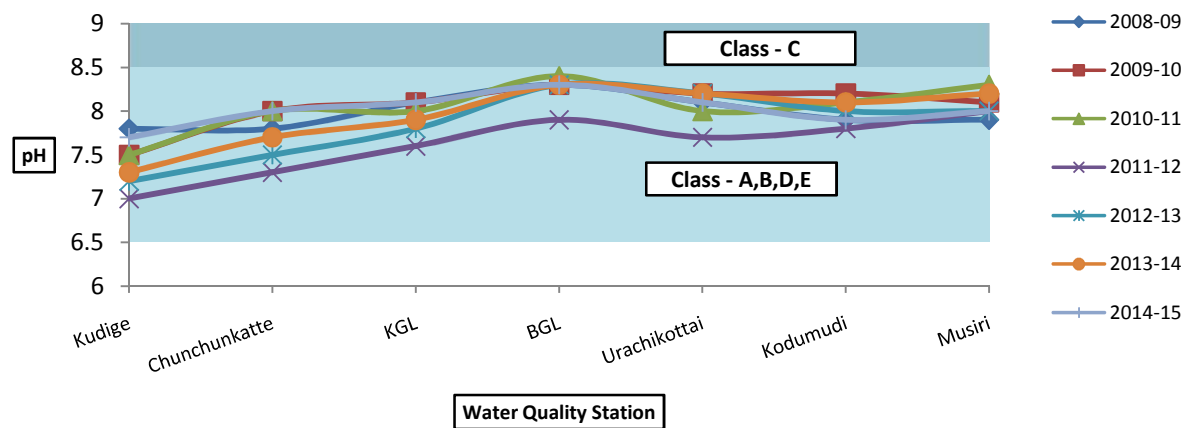
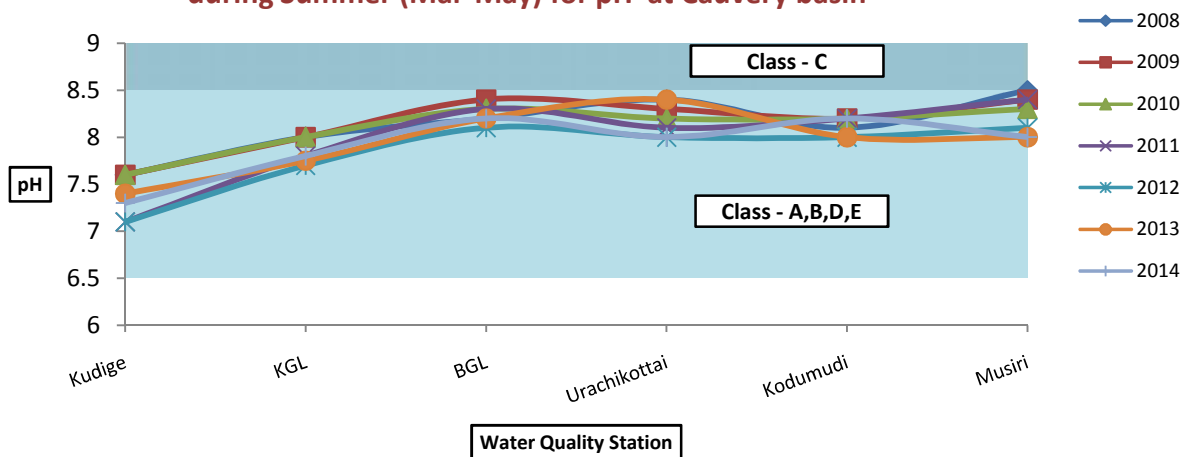
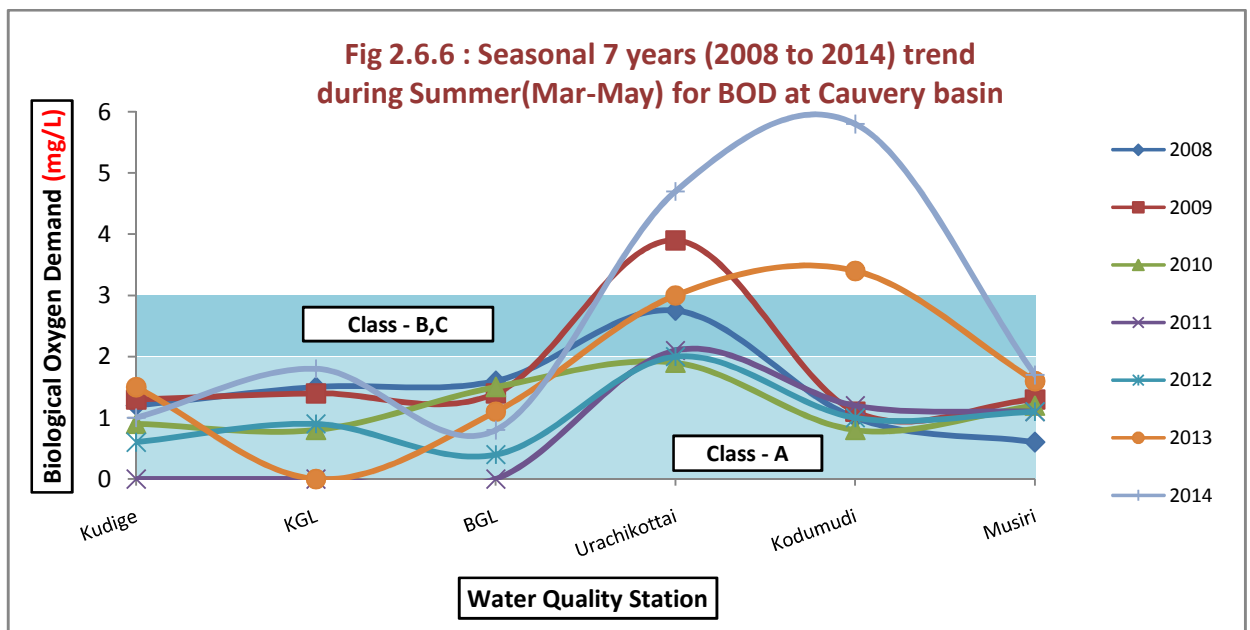
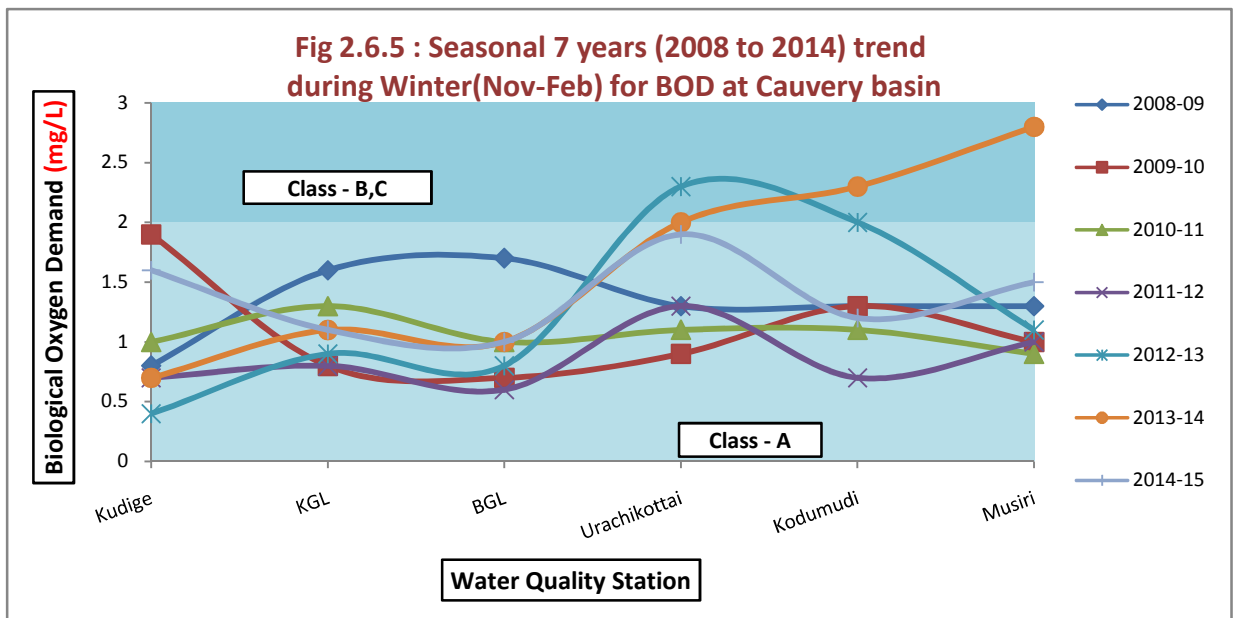
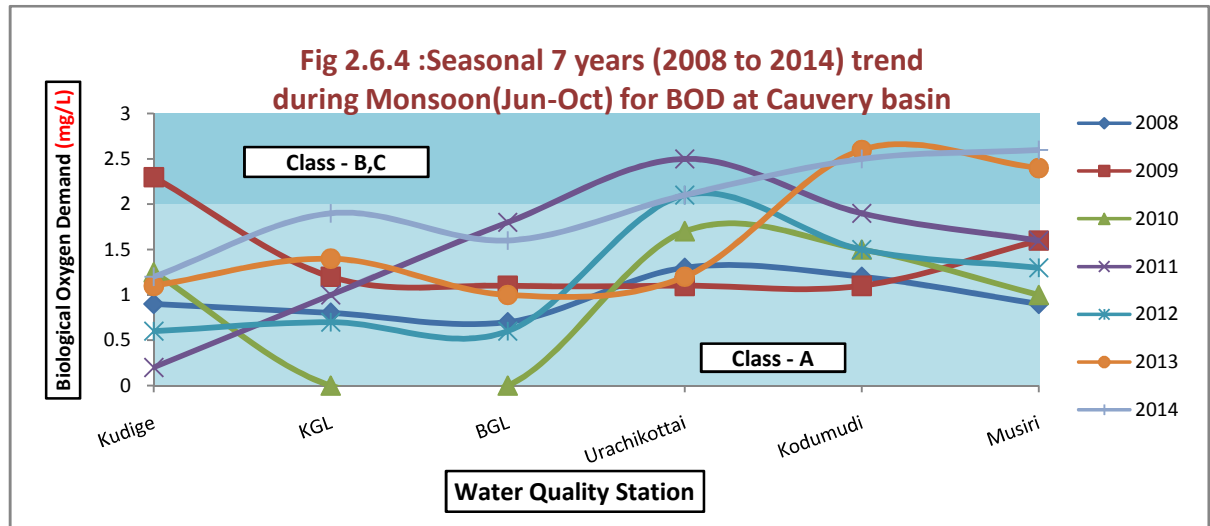


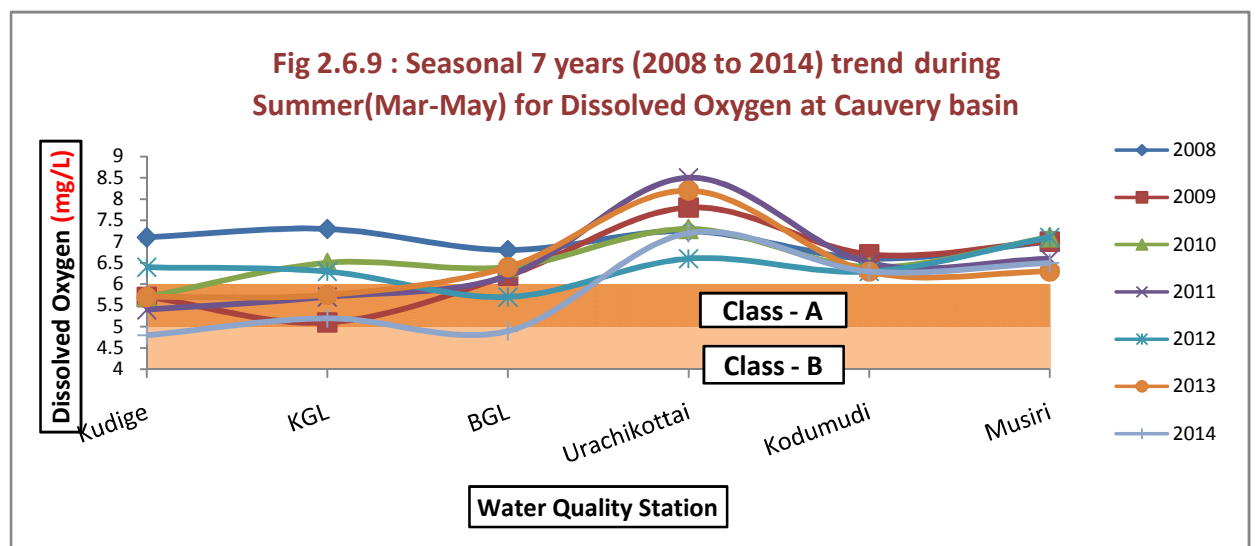
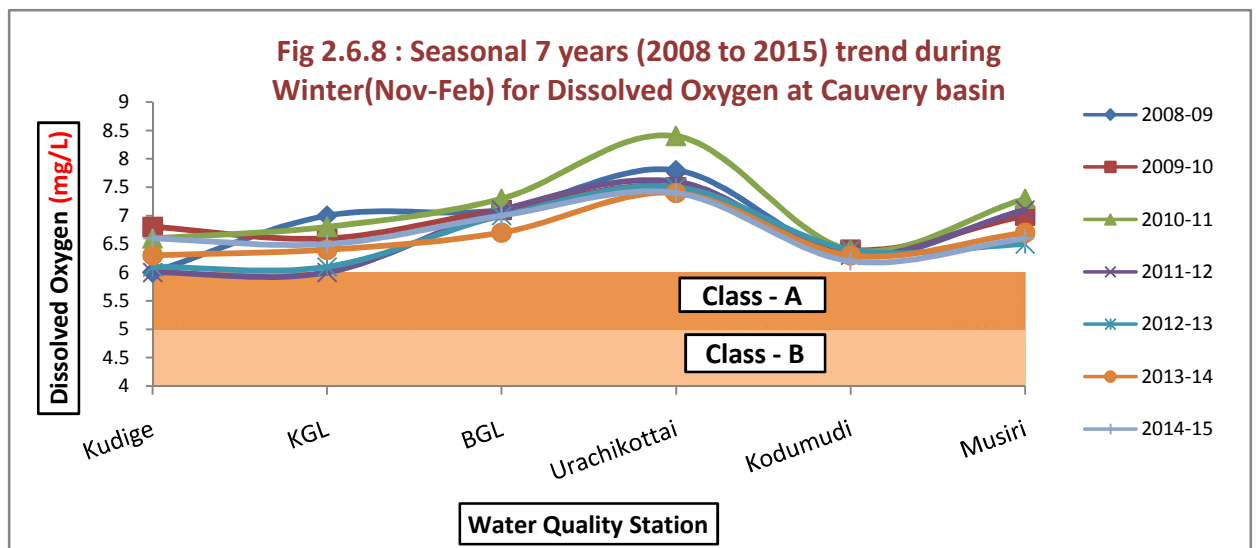
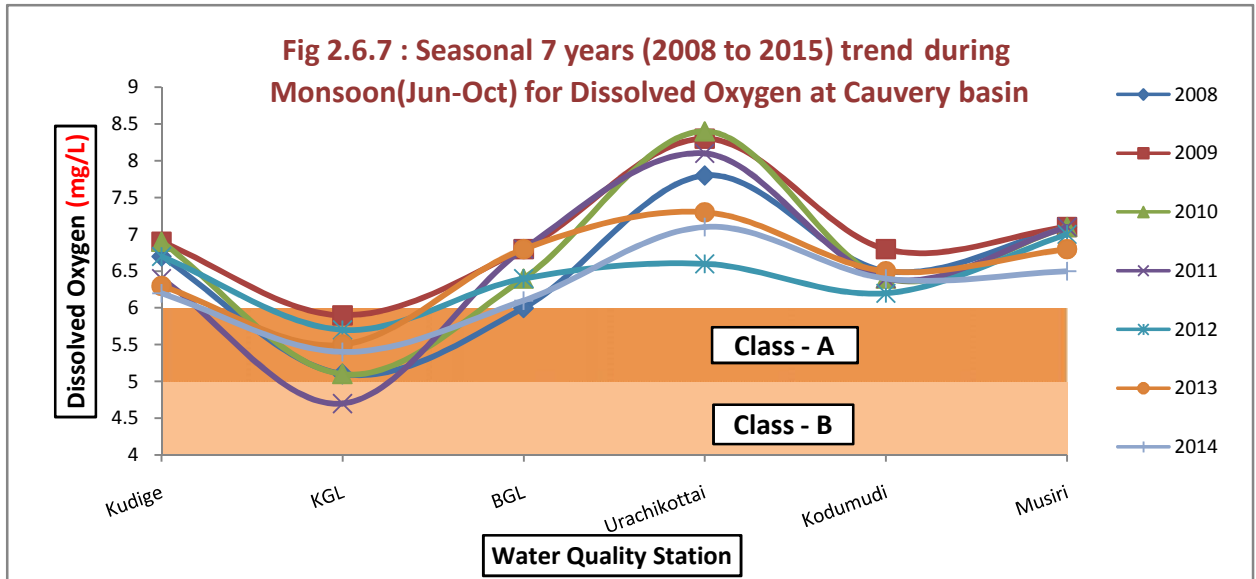
Fig 2.6.3: Seasonal 7 years (2008 to 2014) trend during Summer (Mar-May) for pH at Cauvery basin



Basin: Cauvery (Water Quality Parameter : Biological Oxygen Demand)



Basin: Cauvery (Water Quality Parameter : Dissolved Oxygen)



Basin: Cauvery (Water Quality Parameter -> Total Hardness)

Fig 2.6.10 : Seasonal 7 years (2008 to 2014) trend during Monsoon (Jun-Oct) for Total Hardness at Cauvery basin

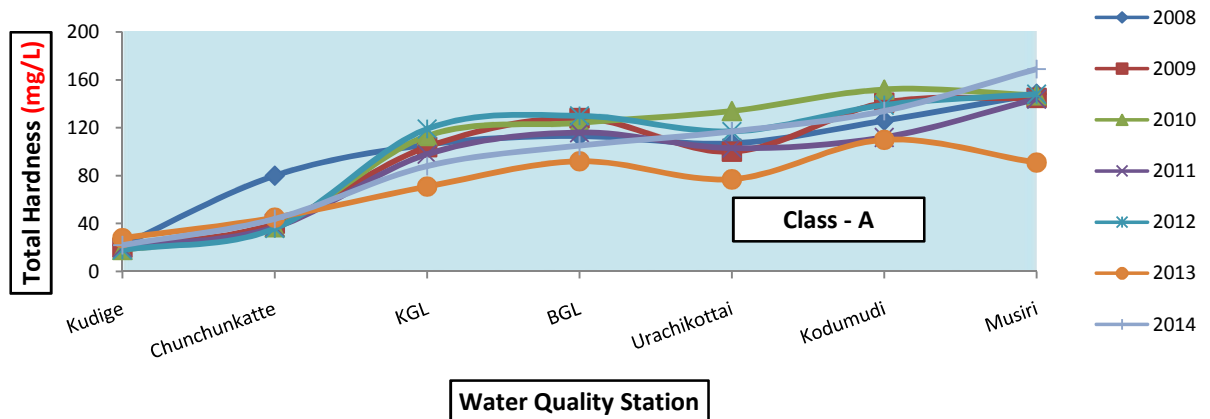


Fig 2.6.11 : Seasonal 7 years (2008 to 2015) trend during Winter (Nov-Feb) for Total Hardness at Cauvery basin

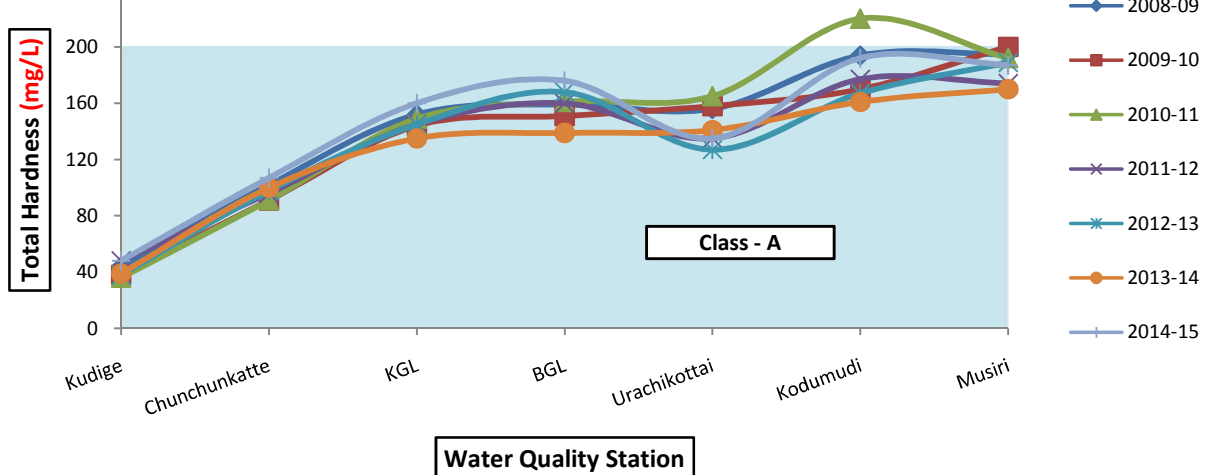


Fig 2.6.12 : Seasonal 7 years (2008 to 2014) trend during Summer (Mar-May) for Total Hardness at Cauvery basin

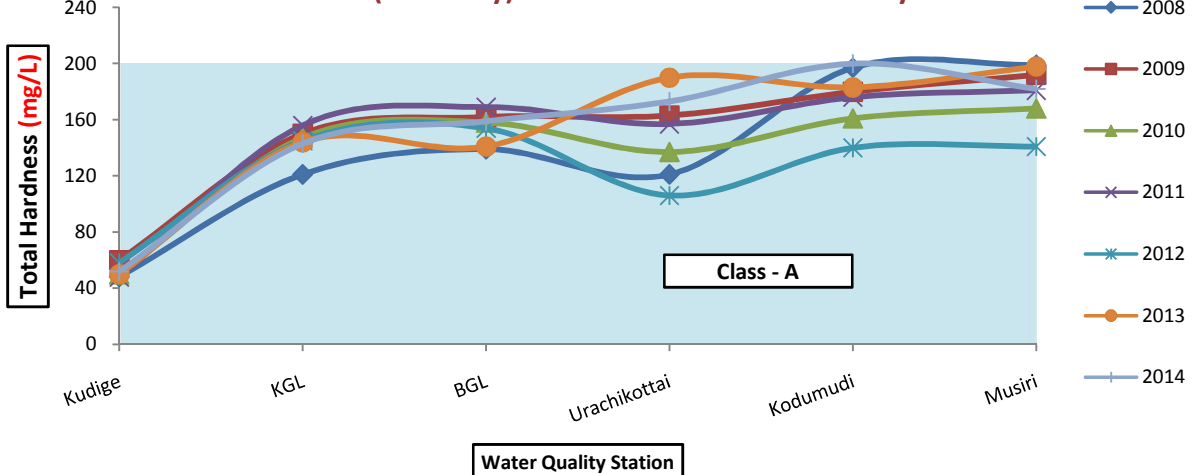
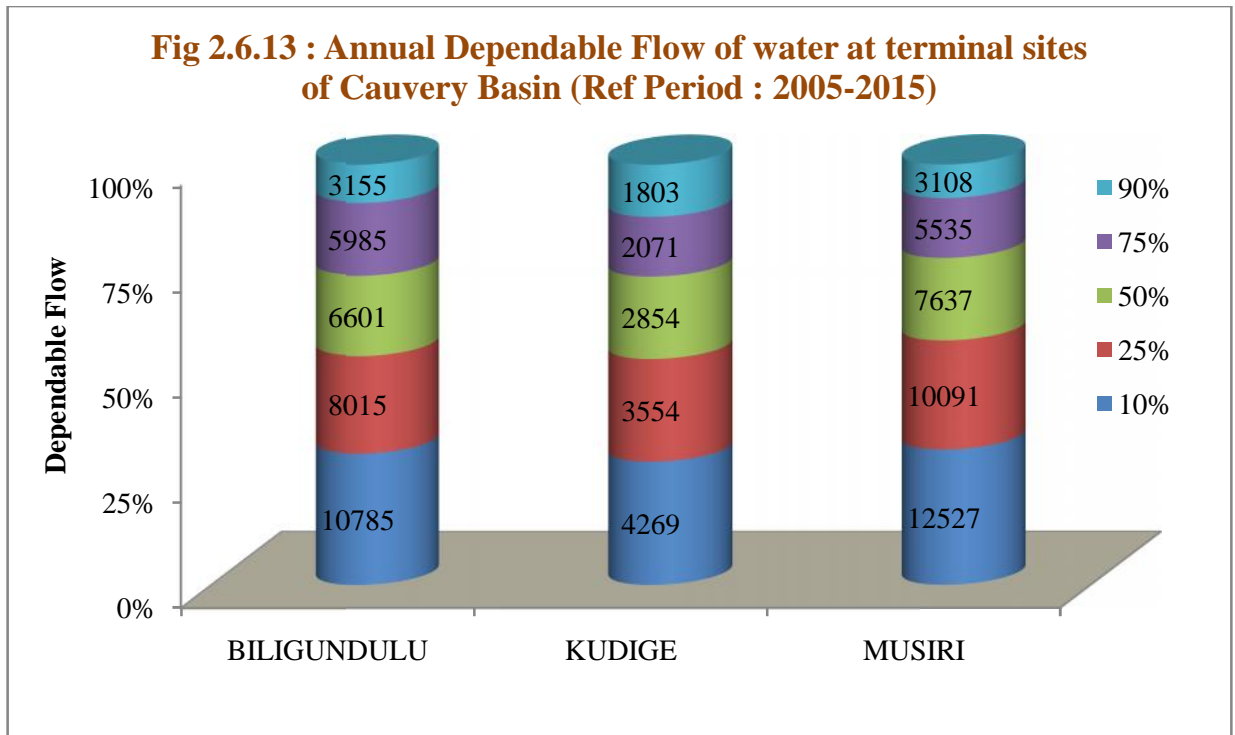


Table 2.6.1: Annual Dependable Flow Of Water at Terminal Sites Of Cauvery Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	BILIGUNDULU	6/2005 to 5/2015	10785.40	8014.54	6600.60	5984.66	3154.66	NA
2	KUDIGE		4268.86	3554.22	2853.91	2071.43	1802.53	NA
3	MUSIRI		12526.75	10090.70	7636.92	5535.44	3107.97	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore



2.6.5 Land Use Statistics: Table 2.6.2 to Table 2.6.4 present below the land use pattern, gross irrigated area and net irrigated area for Cauvery basin as compared to all basins (Region-III).

TABLE 2.6.2: LAND UTILISATION PATTERN BY CAUVERY AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Cauvery	85567.32	15926.05	14040.97	6072.95	13096.11	36431.24	9710.26	46141.49
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte.. of Economics & Statistics, M/o. Agriculture

TABLE 2.6.3: GROSS AREA IRRIGATED BY SOURCES OF CAUVERY AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Cauvery	9092.46	2.27	9094.73	865.56	4373.48	5262.20	9635.68	111.41	19707.39
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.6.4: NET AREA IRRIGATED BY SOURCES OF CAUVERY AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Cauvery	7459.49	2.70	7462.19	809.06	3687.75	4489.44	8177.20	266.06	16714.51
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.6.6 Urban Centre: Important cities on the basin are Coimbatore, Bangalore & Tiruchirapally.

2.6.7 Industries: Some of the main industries in the basin are Paper mills, Sugar mills, Chemical Factories, and Cotton mills. Mining activity in the basin includes Stone mining for building construction works.

2.7 PENNAR BASIN

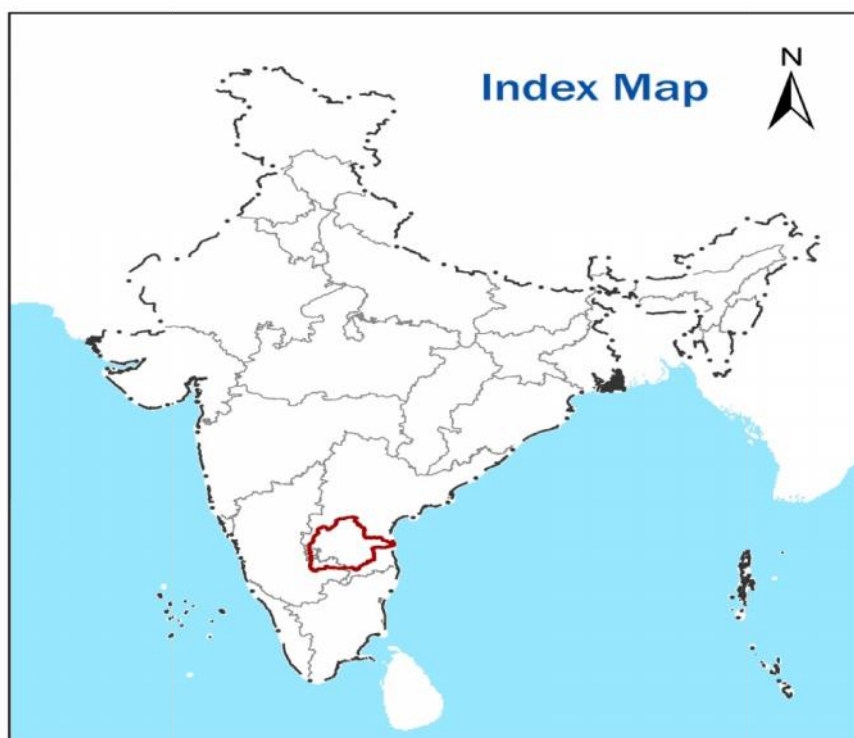
Location: The Pennar River is one of the major East Flowing Rivers in Southern India. It rises in the Chenanakesava hill of the Nandidurg range in Karnataka, flows in the north westerly direction through Kolar and Tumkur districts of Karnataka; it enters erstwhile Andhra Pradesh in the Hindupur taluk of Anantapur district, runs eastwards before draining into the Bay of Bengal near Nellore. The Basin lies between east longitude $77^{\circ} 1'$ to $80^{\circ} 10'$ and north latitude $13^{\circ} 18'$ to $15^{\circ} 49'$. The fan shaped basin is bounded by the Erramala range on the North, by the Nallamala and Velikonda ranges of the Eastern Ghats on the East, by the Nandidurg hills on the South and by the narrow ridge separating it from the Vedavati valley of the Krishna Basin on the West. The other hill ranges in the basin to the South of the river are the Seshachalam and Paliconda ranges.

The total length of Pennar river is 597 Km of which 61 Km runs in Karnataka and the rest in Andhra Pradesh. This river has six major tributaries namely, the Jayamangali, the Kunderu and the Sagileru joining from the left, the Chitravathi, the Papagni and the Cheyyeru joining on the right.

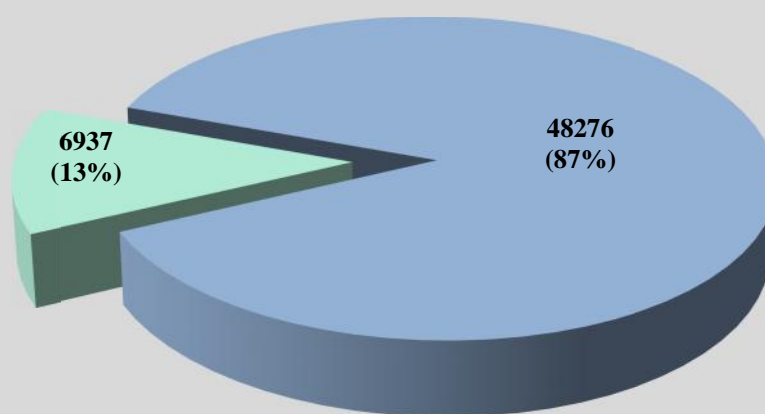
2.7.1 Major Projects: Tungabhadra RB High level Canal stage - i & ii, Somasila, Pulivendula Branch Canal, Pennar Delta are the major projects in the catchment area of the basin.

2.7.2 Hydrological Observation Stations: Central Water Commission is operating 8 Hydrological Observation sites on Main Pennar and its tributaries located at i) Nellore (GDQ), ii) Nandipalli (GDQ), iii) Chennur (GDSQ), iv) Alladupalli (GDSQ), v) Kamalapuram (GDQ), vi) Tadipatri (GDQ), vii) Nagalamadike (GDQ) and viii) Singavaram (GDQ).





State Wise Pennar Basin Area (Sq. km)



■ ANDHRA PRADESH ■ KARNATAKA

Pennar River Flow Line Diagram

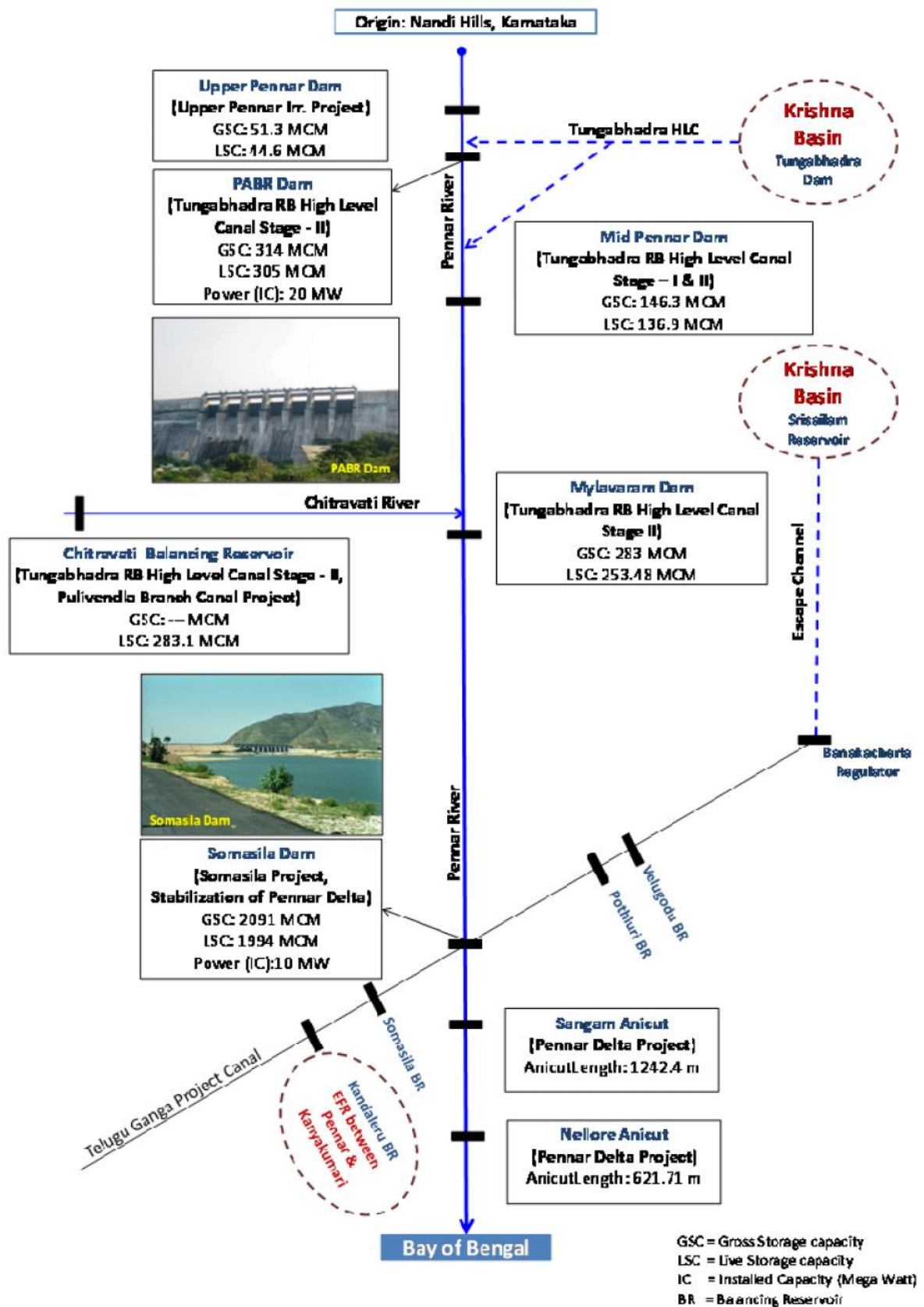
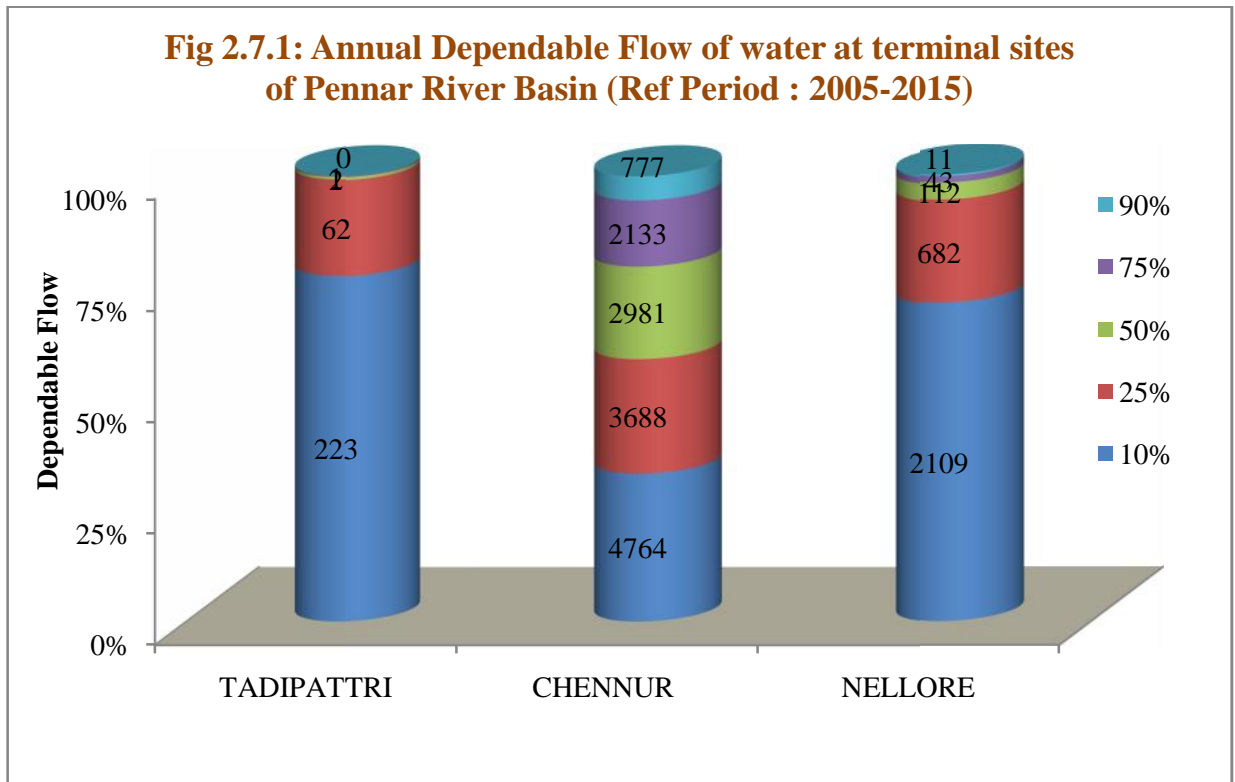


Table 2.7.1: Annual Dependable Flow Of Water at Terminal Sites Of Pennar Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	TADIPATTRI	6/2005 to 5/2015	222.66	62.06	1.75	0.79	0.04	NA
2	CHENNUR		4763.69	3688.42	2980.70	2133.02	776.76	NA
3	NELLORE		2108.70	681.88	112.18	42.51	11.16	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore



2.7.3 Land Use Statistics: Table 2.7.2 to Table 2.7.4 present the land use pattern, gross irrigated area and net irrigated area for Pennar basin as compared to all basins (Region-III).

TABLE 2.7.2: LAND UTILISATION PATTERN OF PENNAR AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Pennar	54771.18	11176.11	11210.93	3066.95	9538.95	19778.23	1919.04	21697.27
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.7.3: GROSS AREA IRRIGATED BY SOURCES OF PENNAR AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Pennar	1457.86	0.00	1457.86	282.63	4507.69	196.17	4703.86	152.30	6596.64
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.7.4: NET AREA IRRIGATED BY SOURCES OF PENNAR AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Pennar	1255.72	0.00	1255.72	270.78	3703.56	168.68	3872.24	135.34	5534.08
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.8 EAST FLOWING RIVERS BETWEEN MAHANADI AND PENNAR BASIN

Location: The basin spreads over states of Andhra Pradesh and Odisha having an area of 86,643 Sq. km and stretches between 78° 40' to 85° 1' east longitudes and 14° 34' to 20° 22' north latitudes. It is bounded by the Eastern Ghats on the north and west, by Nallamala Range and Andra plains on the south and by the Bay of Bengal on the east.

This composite basin comprises of three river systems. The river systems between Mahanadi and Godavari covers an area of 49,685 Sq. km and the river systems between Krishna and Pennar extends over an area of 24,669 Sq. km. In addition, there is also a small area between Godavari and Krishna drained mainly by the small stream of Palleru. This minor portion of the basin has an area of about 12,289 Sq. km. The independent rivers (directly draining into Bay of Bengal) in the basin from north to south are the Rushikulya, Bahuda, Vamsadhara, Nagavati, Sarada, Varaha, Tandava, Eluru, Gundlakamma, Tammileru, Musi, Paleru and Manneru etc.

The major part of basin is covered with agricultural land accounting to 59.85% of the total area and 3.66% of the basin is covered by water bodies. The basin spreads over 19 districts (2011) comprising 11 of Andhra Pradesh and 8 of Odisha state. Brief descriptions of the major independent rivers are given below.

2.8.1 Rushikulya : The Rushikulya River is one of the east flowing rivers in Odisha. It covers entire catchment area in the districts of Kandhamal and Ganjam. The river flows through Purushottampur, Pratappur and joins with the Bay of Bengal at Ganjam district. The river Rushikulya originates at an elevation of about 1000 metre near Matabarhi village of Kandhamal district of Odisha State and lies within the geographical co-ordinates of 19° 07' to 20° 19' north latitude and 84° 01' to 85° 06' east longitude. The total catchment area is 7700 sq km. The Barhanadi, Ghodapada, Baghua and Pathama are the main principal tributaries.

2.8.2 Vamsadhara: The Vamsadhara River is an important east flowing river between Mahanadi and Godavari. The river originates near Lanjigarh village in Kalahanadi district in Odisha and traverses a total distance of about 221 km before it joins the Bay of Bengal at Kalingapatnam in erstwhile Andhra Pradesh. It has five principal tributaries viz. Chauldua, Phalphalia, Ganguda (Harbhanga), Sanna Nadhi and Mathendranatha. Most of its catchment area falls on the left. The basin is narrow and full of undulations. It is situated within the geographical co-ordinates of 18° 15' to 19° 55' north latitudes and 83° 20' to 84° 20' east longitudes. The total catchment area of this basin works out to 10,830 Sq km.

2.8.3 Sarada: The Sarada River, an east flowing medium sized river, lies in the district of Visakhapatnam of erstwhile Andhra Pradesh. The geographical co-ordinates of the river are north latitude 17° 25' to 18° 17' and east longitude 82° 32' to 83° 06'. The basin is surrounded by Nagavali in the north, Gostari, Gambi Ramgedda, Megadnigedda in the east, Bay of Bengal in the south and Machhkund sub-basin of the Godavari in the west. The catchment area of the basin is 2665 sq km. It rises at an elevation of 1000 metre near Longuparu village and traverses a distance of 104 km before joining the sea. The average rainfall is 1000 mm.

2.8.4 Nagavali : The Nagavali river is a medium sized east flowing river in peninsular India and lies within the geographical co-ordinates of north latitude 18° 10' to 19° 44' and east longitudes of 82° 53' and 84° 05'. It is surrounded by Vamsadhara in the north, Champavathi and Peddagedda in the south, Godavari in the west and the Bay of Bengal in the East. It drains parts of the districts of Kalahandi, Rayagada, Koraput of Odisha and Srikakulam,

Vijayanagaram and Visakhapatnam of erstwhile Andhra Pradesh state. The total catchment area is 9510 sq km with an average rainfall of 1000 mm. The Nagavali River originates near the Lakhbahal in Kalahandi district (Odisha) at an elevation of about 1300m. The total length of the river run is 217 km. The important tributaries are Nagavali, Janjhvati, Suvarnamukhi, and Vegavathi.

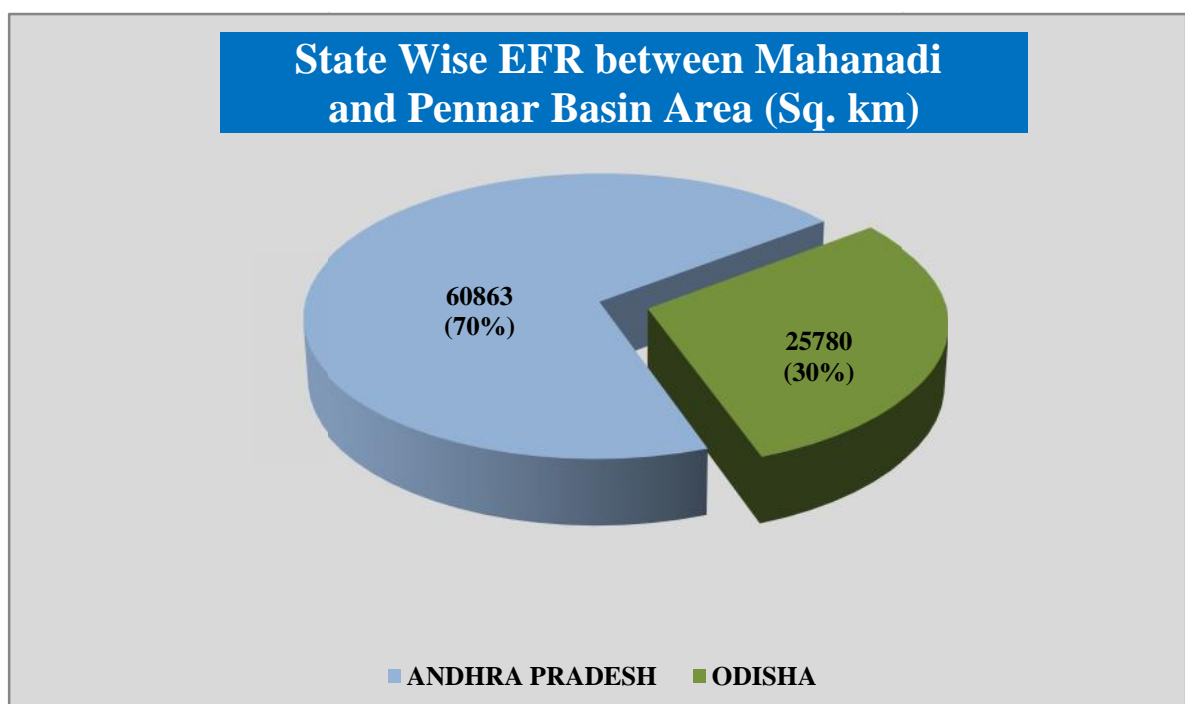
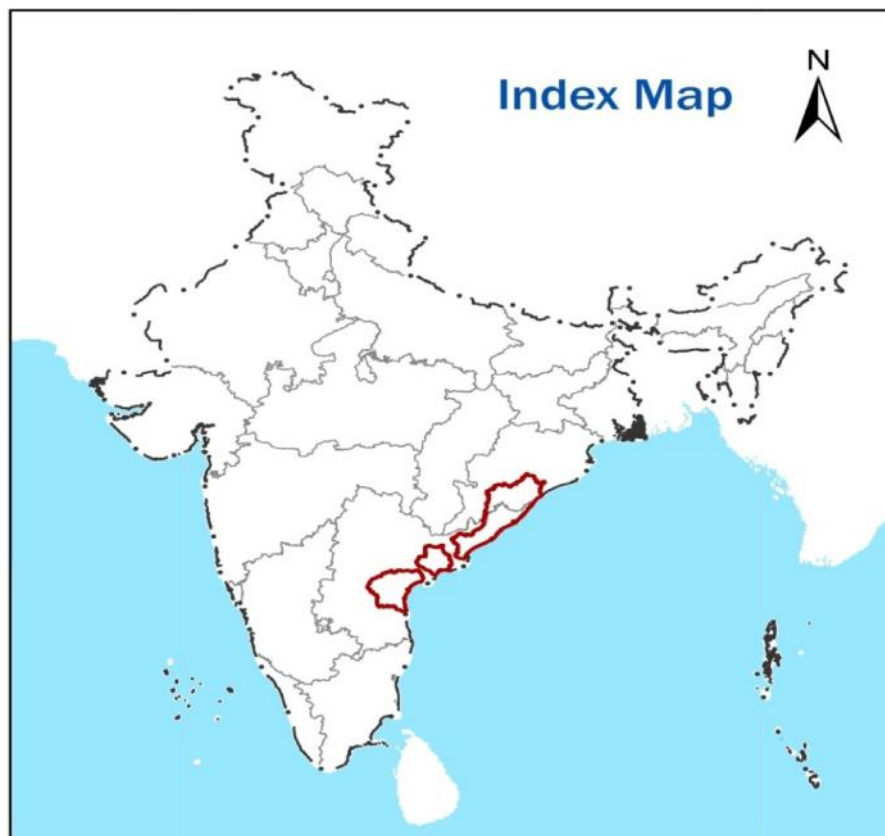
2.8.5 Gundlakama: The Gundlakama river rises near Iskagundam village in Kurnool district at an elevation of 600 metre from the eastern slopes of the Nallamala hills at north latitude $15^{\circ} 38'$ and east longitude $78^{\circ} 47'$ and flows in a north-east, east and southern direction for a total length of 220 km to join the Bay of Bengal. The total area drained by this river is 8,494 sq km and total catchment area for the river is 7681 sq. km. The Kandleru is its important left bank tributary. There is one H.O. site for each for Gauge, Discharge, Sediment and Water Quality.

2.8.6 Paleru: The Paleru river rises from near Gogulapalle Village in Nellore District of Andhra Pradesh at an elevation of 325 metre and flows for a total length of 104 Km. The catchment area of the river is 2,483 Sq. Km which lies entirely in Andhra Pradesh. The river basin lies at north latitude $15^{\circ} 17'$ and east longitude $79^{\circ} 13'$. Paleru Bitragunta Irrigation Project is a medium project which benefitted the Prakasam district.

2.8.7 Irrigation Projects: The Rushikulya Irrigation System is the only Major Irrigation Project in the catchment area of the Rushikulya River Basins. The Gotta barrage project in Vamsdhara basin, the Thotapally, Narayan Puram and Jaiyavathi are the major irrigation projects in the catchment areas of the Nagavali river basin.

2.8.8 Hydrological Observation Sites: There are 13 Hydrological observation sites in the basin, of which 7 sites are of Gauge only, 2 sites for Gauge & Discharge (GD) and 4 sites are of GDSQ type (as per 2014-15 data).





EFR between Mahanadi and Pennar Flow Line Diagram

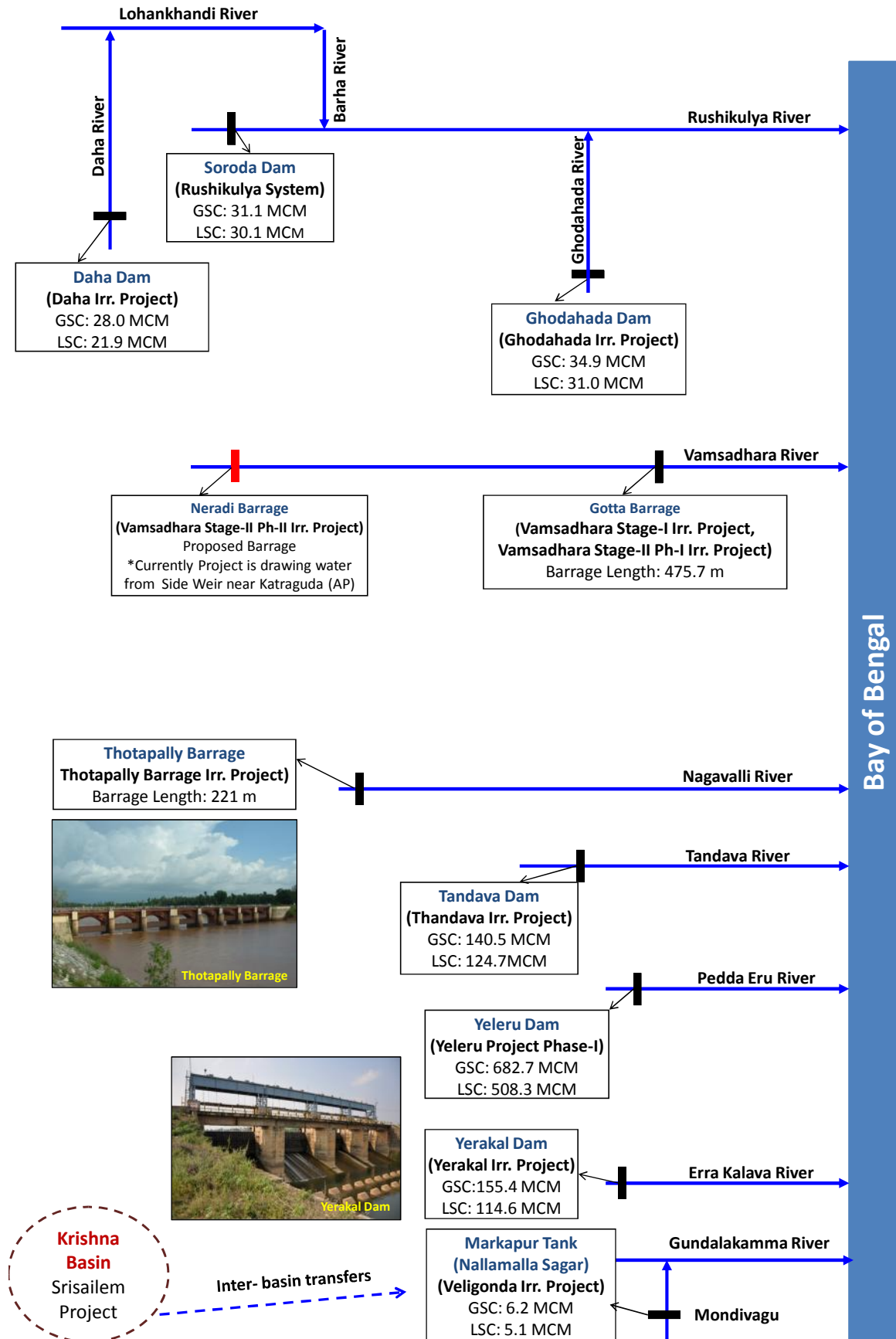
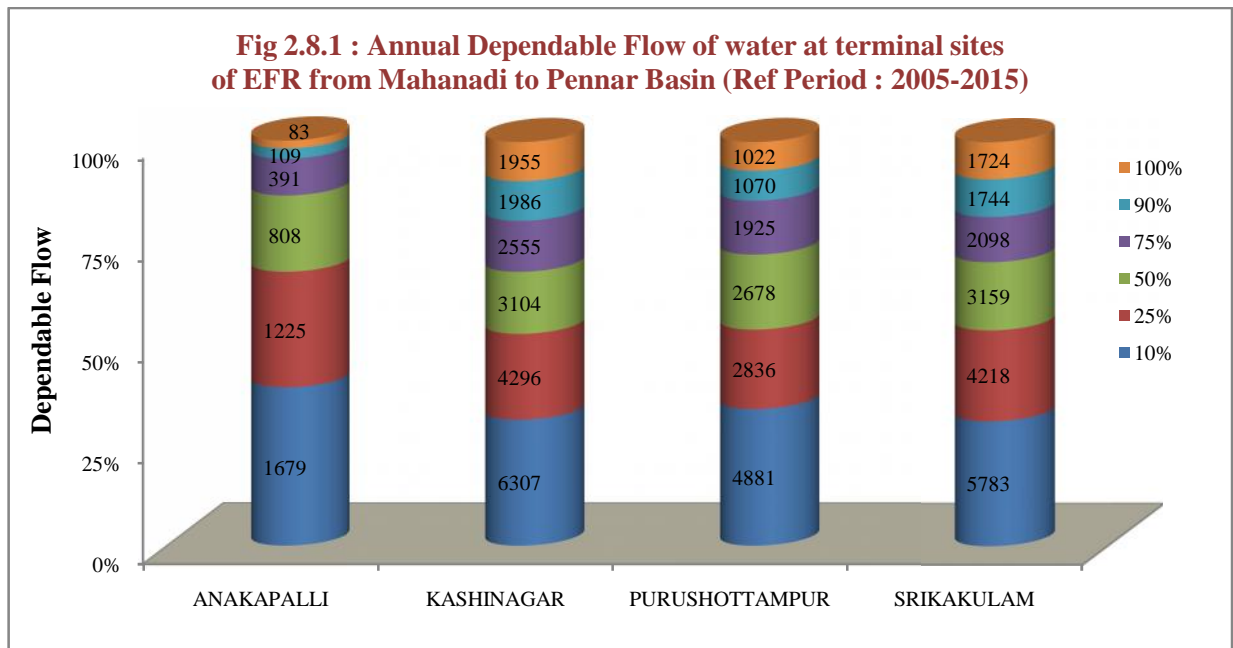


Table 2.8.1: Annual Dependable Flow of Water at Terminal Sites of EFR between Mahanadi and Pennar Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	ANAKAPALLI	6/2005 to 5/2015	1679.47	1225.21	807.87	391.16	109.07	82.96
2	KASHINAGAR		6307.46	4295.73	3104.34	2554.57	1985.89	1954.57
3	PURUSHOTTAMPUR		4880.81	2836.03	2677.89	1925.33	1070.19	1022.48
4	SRIKAKULAM		5783.13	4218.35	3158.52	2097.66	1743.76	1724.35

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore



2.8.9 Land Use Statistics: Table 2.8.2 to Table 2.8.4 present the land use pattern, gross irrigated area and net irrigated area of the basin as compared to all basins (Region-III).

TABLE 2.8.2: LAND UTILISATION PATTERN OF EFR FROM MAHANADI TO PENNAR AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
EFR from Mahanadi to Pennar	84552.08	23972.84	18126.31	4236.76	8720.88	29495.29	8413.76	37909.04
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.8.3: GROSS AREA IRRIGATED BY SOURCES OF EFR FROM MAHANADI TO PENNAR AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
EFR from Mahanadi to Pennar	11087.23	1024.27	12111.51	2688.94	5811.86	478.15	6290.01	731.72
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.8.4: NET AREA IRRIGATED BY SOURCES OF EFR FROM MAHANADI TO PENNAR AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
EFR from Mahanadi to Pennar	7317.35	0.00	7317.35	1977.79	3821.20	251.51	4072.70	3405.20
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.8.9 Urban Centres: Behrampur city, Ganjam and Sorada are situated in the basin. Srikakulam, Gunupur, Visakhapatnam and Vijayanagaram are other important towns in the basin.

2.8.10 Industries: Major industries in the basin are chemical, sugar, Spinning Mills and Steel plants.

2.8.11 Minerals: The basin is rich in mineral wealth. The major economic minerals are clay, lime stone, manganese, graphite, mica, bauxite, aluminium, fire clay, quartz, sand talc, black sand and grinding materials.

2.9 EAST FLOWING RIVERS FROM PENNAR TO KANYAKUMARI BASIN

Location: The basin extends over states of Tamil Nadu, Andhra Pradesh, Karnataka and Union Territory of Puducherry having a total area of 1,02,287.9 sq. km (*GIS Calculated as per India-WRIS Database*) and accounts for nearly 3.08% of the total geographical area of the country. The basin extends between 77°1' to 80°17' east longitudes and 8°11' to 14°27' north latitudes. It is bounded by the Eastern Ghats on the north, by Tamil Nadu uplands on the west, by the Indian Ocean on the south and by the Bay of Bengal on the east.

The composite basin comprises of the river systems between Pennar and Cauvery having an area of 63,646.2 Sq.km and the river systems between Cauvery and Kanyakumari with an area of 38,646.1 Sq.km. The independent rivers (directly draining into Bay of Bengal) are the Kandleru, the Swarnamukhi, the Arani, the Korttalaiyar, the Cooum, the Adyar, the Palar, the Gingee, the Ponnaiyar, the Vellar, the Varshalei, the Vaigai, the Gundar, the Vaippar and the Tambraparni. The basin is comprised of four sub-basins; Vaippar and others Sub-basin, the Palar and other sub-basin, Pamba and others sub-basin and Ponnaiyar and other sub-basin. The salient features for the basin are described in Table 2 (2.9).

The major part of basin is covered with agricultural land accounting to 66.65% of the total area, forest area comprising of 15% of the basin area and 9.02% of the basin is covered by waterbodies. The utilizable surface water is around 16.50 BCM whereas average annual water potential is 16.46 BCM. The total number of watersheds in this basin is 165. On the basis of the 2001 Census, the total population in this basin is about 3,55,50,515. The basin spreads over forty-nine parliamentary constituencies (2009) comprising of thirty-two in Tamil Nadu, six of Karnataka, five of Andhra Pradesh, five of Kerala and one of Puducherry.

Brief descriptions of the rivers flowing in the basin are given below.

2.9.1 Swarnamukhi: The Swarnamukhi is an East Flowing river basin having a small catchment Area of 3,225 sq km. It rises at an elevation of 300 metre in the Eastern Ghat ranges near Pakada village in Chittur district of erstwhile Andhra Pradesh at North latitude 13° 28' and east longitude 79° 09'. It runs generally in north eastern direction passing through the famous Tirupati hills before joining into the Bay of Bengal. This Independent river has no major tributaries and therefore its flow depends only on rainfall in its upper catchment. There is one H.O. site for each for Gauge, Discharge, Sediment and Water Quality.

2.9.2 Kalingi: The Kalingi River is one of the East flowing rivers in erstwhile Andhra Pradesh. It originates near Kalahasti in erstwhile Andhra Pradesh and drains completely in erstwhile Andhra Pradesh and joins in Pulicat lake after Sulerpet. The catchment area of Kalingi River is 5,927 sq km and the length is 76 km. The important tributary is Kalleru river which joins Kalingi River after Sulerpet town. There is one H.O. site for each for Gauge, Discharge, Sediment and Water Quality.

2.9.3 Palar: The Palar basin is an important basin among the 12 basins lying between the Pennar and the Cauvery basin. This basin is divided into three major topographical divisions namely, (i) the hill ranges of Eastern Ghats (ii) the plateau region and (iii) the coastal plains. Though most of the drainage area lies in Tamil Nadu, its drainage area extends to cover the southeast and southwest parts of Karnataka and erstwhile Andhra Pradesh respectively. The shape of the basin is rhombus. The basin finds its outlet into Bay of Bengal. The Palar drains an area of 17,871 sq km out of which nearly 57 percent lies in Tamil Nadu and the balance in

the states of Karnataka and erstwhile Andhra Pradesh. Each of Gauge, Discharge and Water Quality type of H.O. sites are having 3 sites.

2.9.4 Ponnaiyar: The Ponnaiyar basin is the second largest inter-state East Flowing river basin among the 12 basins lying between the Pennar and the Cauvery basins. It covers a large area in the state of Tamil Nadu, besides the areas covered in the states of Karnataka and erstwhile Andhra Pradesh. It lies between the east longitudes $77^{\circ} 33'$ to $79^{\circ} 47'$ and north latitudes $11^{\circ} 45'$ to $13^{\circ} 30'$. This basin is bounded in the northwest and south by various ranges of the Eastern Ghats like the Velikonda range, the Nagari hills, the Javadu hills, the Shevaroy hills, the Chitteri hills and the Kalrayan hills and in the east by the Bay of Bengal. The Ponnaiyar drains an area of 16,019 Sq km out of which nearly 77 percent lies in Tamil Nadu. The Ponnaiyar the Dakshina Pinakini river rises near Hongashenhalli village at an elevation of about 900m above msl in the Kolar district of Karnataka state. From its origin, the river Ponnaiyar generally flows in the southern direction through Kolar and Bangalore districts of Karnataka to a length of 79 km before entering the Dharmapuri district of Tamil Nadu. The river flows another 247 km generally in the south east direction in the districts of Dharmapuri, Vellore, Tiruvannamalai, Cuddalore and Villupuram districts. Then, the river flows in the eastern direction below the Tirukoyilur anicut for another 70 km before finding its way into the Bay of Bengal. The river Ponnaiyar branches into two, the Gadilam near Cuddalore and the Ponnaiyar near the Union Territory of Puducherry. On its way, the river Ponnaiyar receives a number of small streams and rivulets. Krishnagiri and Sathanur Reservoir are the major projects in the catchment areas of the river basin. There are 3 H.O. sites out of which 3 are Gauge, 3 are discharge, 3 for Water Quality and 2 for Sedimentation.

2.9.5 Vellar: The Vellar River rises at an elevation of 900 metre near the village of Tumba in the Chottori hills, of the Eastern Ghats in the Salem district of Tamil Nadu. It flows generally in an easterly direction for a total length of 210 Km through Salem and Cuddalore districts in Tamil Nadu and finally out falls into the Bay of Bengal near Porto Nova in Cuddalore district. It drains a total catchment area of about 8,922 sq km. The Gomukinadhi and Manimukthanadi are the important left bank tributaries and Swetanadhi and Chinnar are the right bank tributaries of the Vellar. There is one H.O. site each for Gauge, Discharge and Water Quality.

2.9.6 Vaigai: The Vaigai basin is an important basin among the 12 basins lying between the Cauvery and Kanyakumari. The basin is bounded by the Varushanadu hills, the Andipatti hills, the Cardaman hills and the Palani hills on the west and the Palk Strait and Palk Bay on the east. This basin is divided into two major topographical divisions namely (i) the hilly areas and (ii) the plains. The basin is elongated in shape and drains into the Palk Bay. The Vaigai drains an area of 7,741 sq km which entirely lies in the state of Tamil Nadu.

The Vaigai river rises on the eastern slopes of the Varushanadu hills at an elevation on 1,200m above msl near Kottamalai in the Madurai district at a north latitude $9^{\circ} 32'$ and east longitude $77^{\circ} 23'$ and flows in the northernly and north easternly directions up to its confluence with the Varahanadi and then takes a turn towards east and south east to flow through Madurai, Sivagangai and Ramanathapuram districts. On its way, the Vaigai receives two important tributaries namely the Suruliyar and the Manjalar on its left bank, besides a large number of small streams and rivulets. The river has been dammed downstream of its confluence with the Suruliyar tributary.

The Suruliyar and the Manjalar, the two important left bank tributaries together account for nearly 20 percent of the total catchment area of the Vaigai. The Suruliyar is the principal tributary of the Vaigai also rises in the eastern slopes of the Varushanadu hills and flows in the north and north eastern direction. It receives Theniar on its left bank just before its confluence

with the Vaigai. The Manjalar another major tributary rises in the Palani hills and flows generally in the easterly direction before joining the Vaigai below the Vaigai dam. The Vaigai also receives another minor tributary namely the Varahanadi on its left bank below the Vaigai dam. The Vaigai Reservoir is a major project in the catchment area of the basin. There are H. O. sites with 3 for each of Gauge, Discharge, Sedimentation and Water Quality.

2.9.7 Vaippar: The Vaippar River rises on the eastern slopes of the Varushanadu hill ranges of the Western Ghats near Sivagiri in Thirunelveli district in Tamilnadu at an elevation of about 900m. It flows generally in an easterly direction for a length of about 125 km through Thirunelveli, Virudhunagar and Tuticorin districts in Tamilnadu and joins the Gulf of Mannar near Kalattur. The river basin is located on south of Vaigai. It drains a total catchment area of 5,069 sq km. The catchment area lies entirely in Tamilnadu. The Arjunanadhi and Vijayanadhi are the important tributaries on the left bank. There is one H.O. site for each of Gauge, Discharge and Water Quality.

2.9.8 Tambraparani: The Tambraparani river rises on the eastern slopes of the Western Ghats at an elevation of about 1,400m at north latitude $8^{\circ} 46'$ and east longitude $77^{\circ} 15'$ near Alwarkurichi village in Thirunelveli district of Tamilnadu to flow in a generally easterly direction for a total length of 130 km and joins the Gulf of Mannar. The Chittar and Manimuthar are the left & right bank tributaries of this river. The total area drained by the Tambraparani is 5,482 sq km. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.9.9 Varahanadi: The main river Varahanadi originates from the Northern part of Pakkammalai hills at an elevation of 5660 metre above m.s.l, in the western slopes past of Gingee Taluk. The total area of the basin is 2564 Sq. Kms. The total length of Varahanadi up to its outfall into Bay of Bengal, a little South of Puducherry state, is about 78.50 kms. There is one H.O. site on this stream at Kumarapalayam being operated by Central Water Commission. There is one H.O. site for each of Gauge, Discharge and Water Quality.

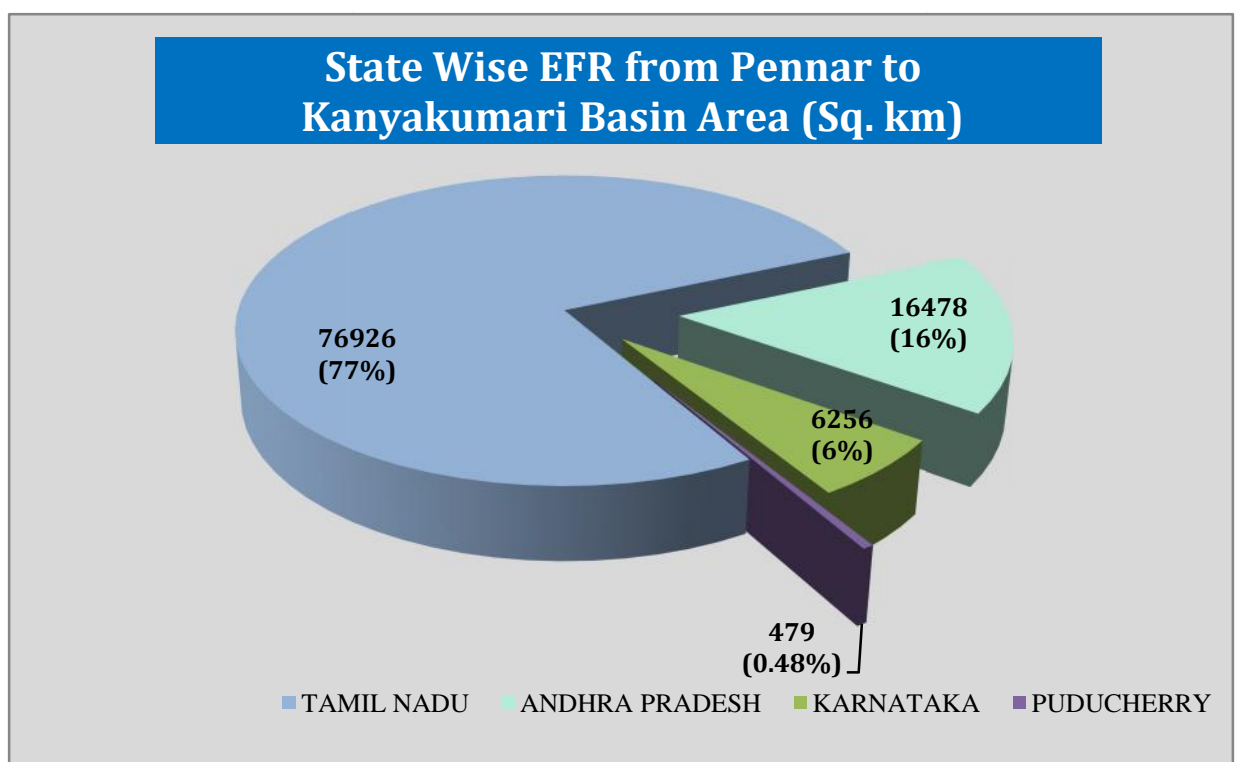
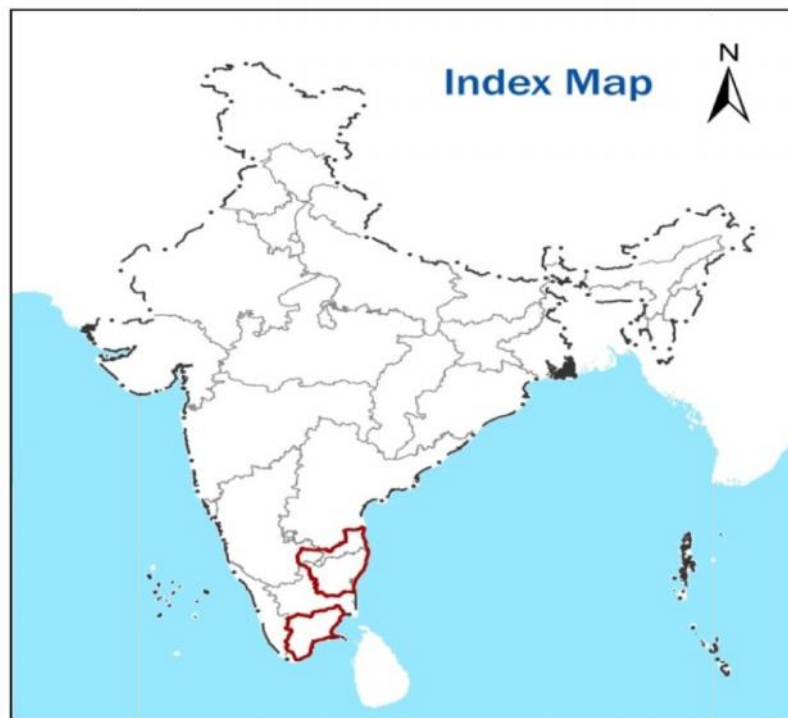
2.9.10 Irrigation Projects: The Somashila in the sub-basin of Pennar, Krishnagiri and Sathanur in the sub-basin of Ponniar, Vaigai reservoir in the sub-basin of Vaigai are the major projects in the catchment areas of the west flowing river basin.

2.9.11 Hydrological Observation Sites: There are 17 sites in the basin for recording observations on water quality, gauge and discharge. Sediment observations are made at 5 of these stations (as per 2014-15 data). (See Table 3)

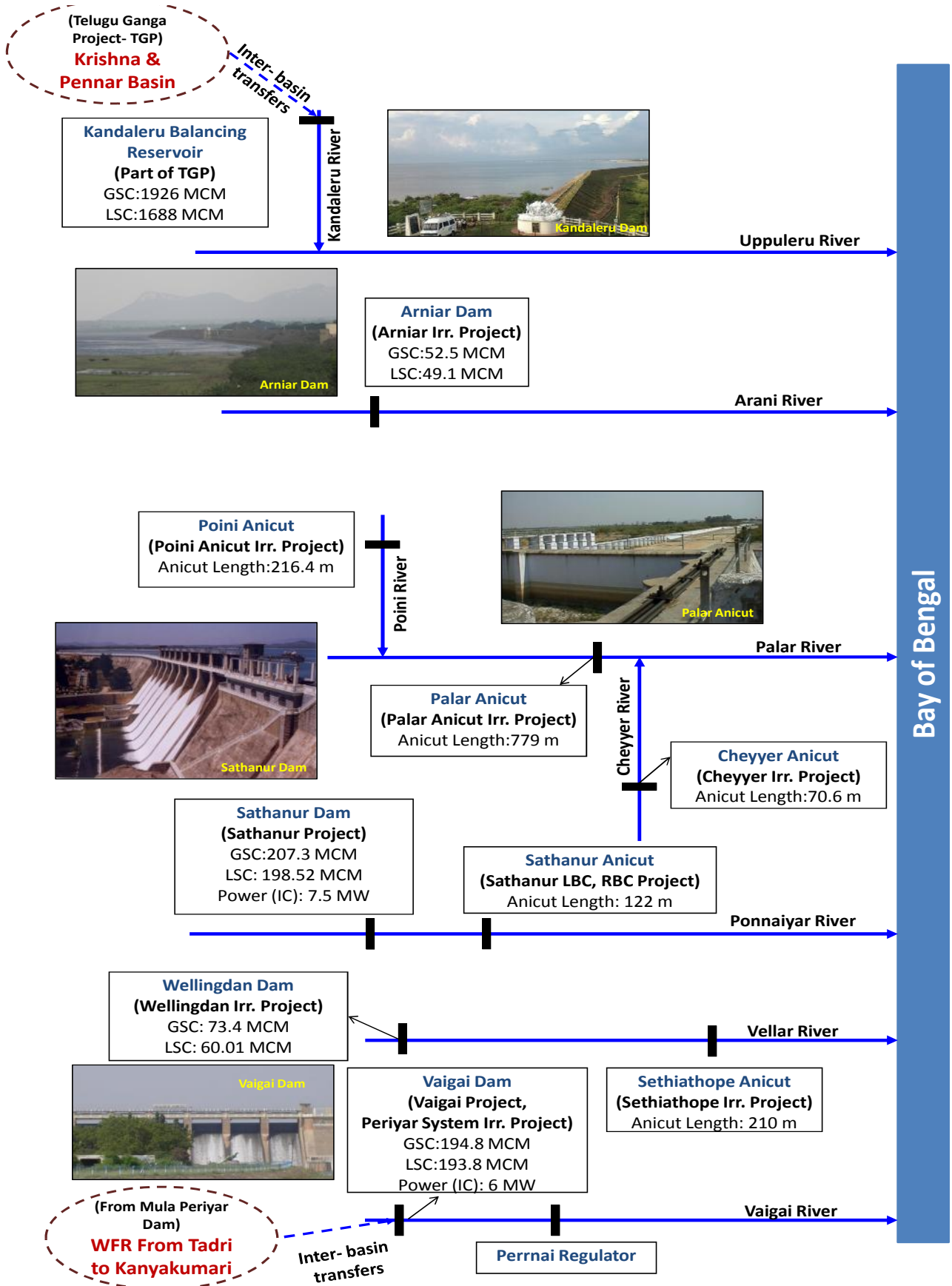
2.9.12 Peak Water Level: Most of the sites have not registered significant peak water level in the basin. Only four sites have registered 200 metre or above peak water level out of 17 reported sites during the reference period 2014-15. The maximum peak water level was observed at Gummanur site (495.60 metre) on 24.10.2005, which is highly significant as compared to observations made at other reporting sites.

2.9.13 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, Total hardness are given below for three sites of the basin (Fig 2.9.1 to Fig 2.9.9).

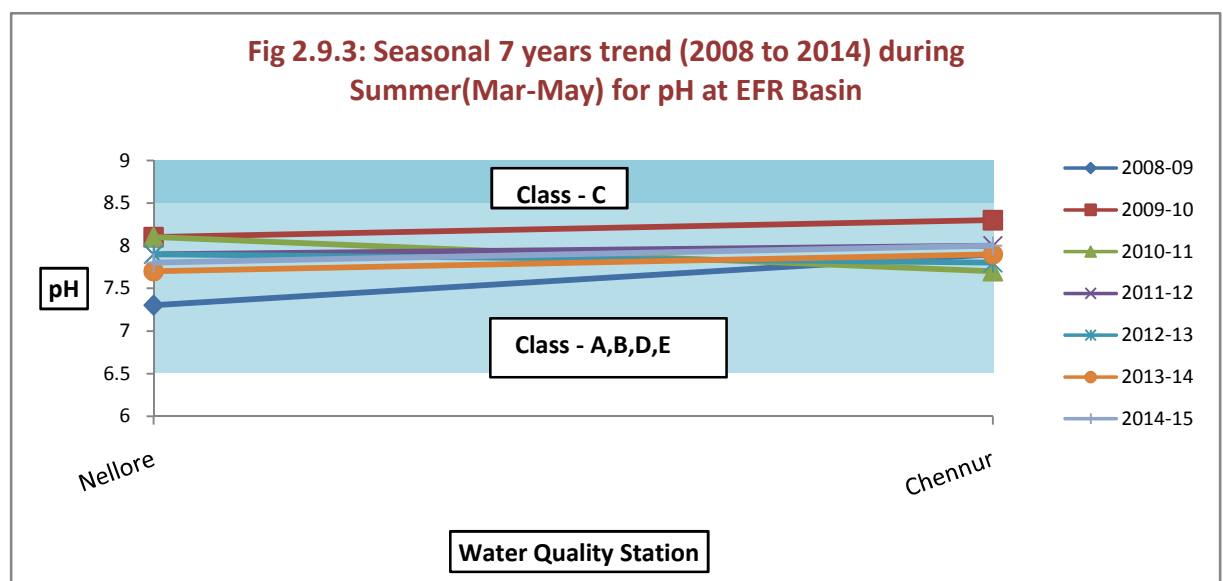
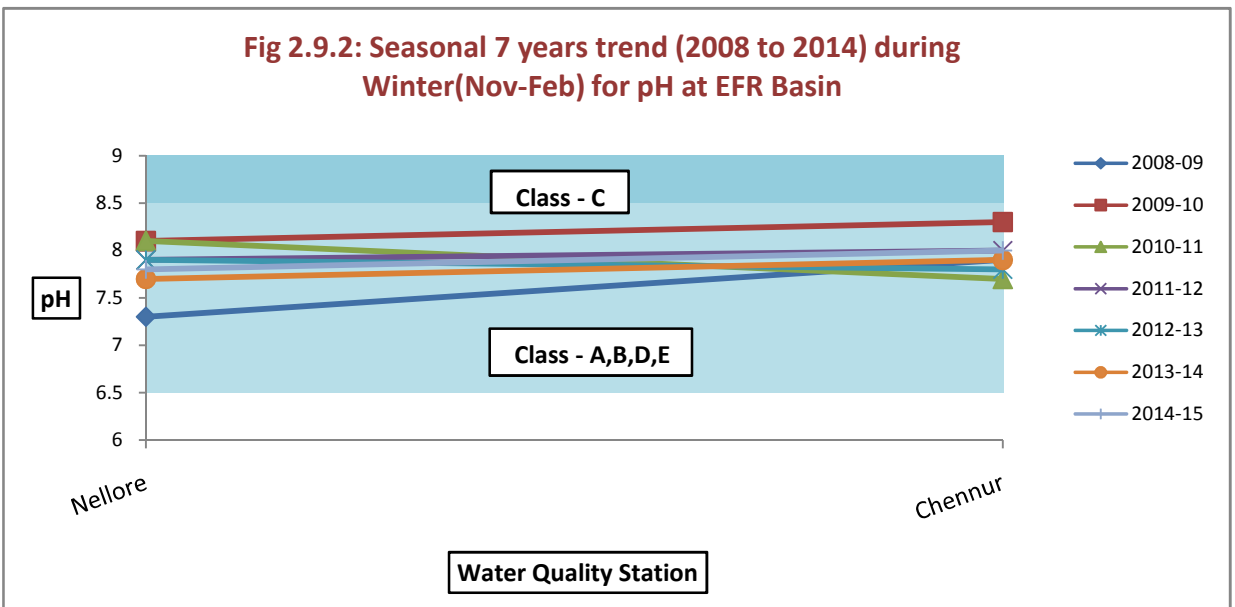
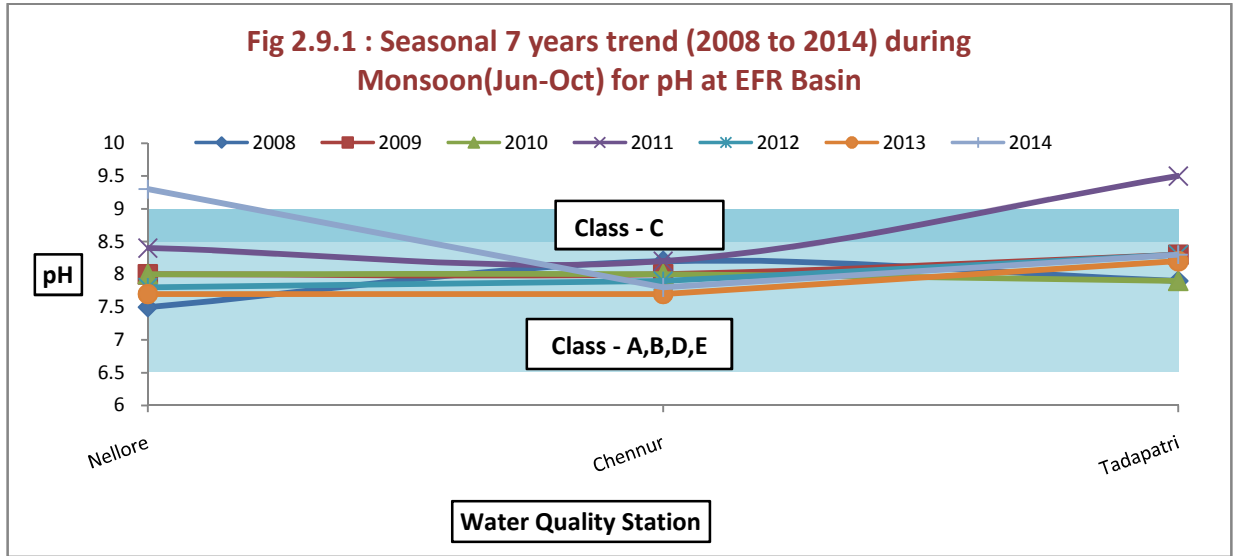




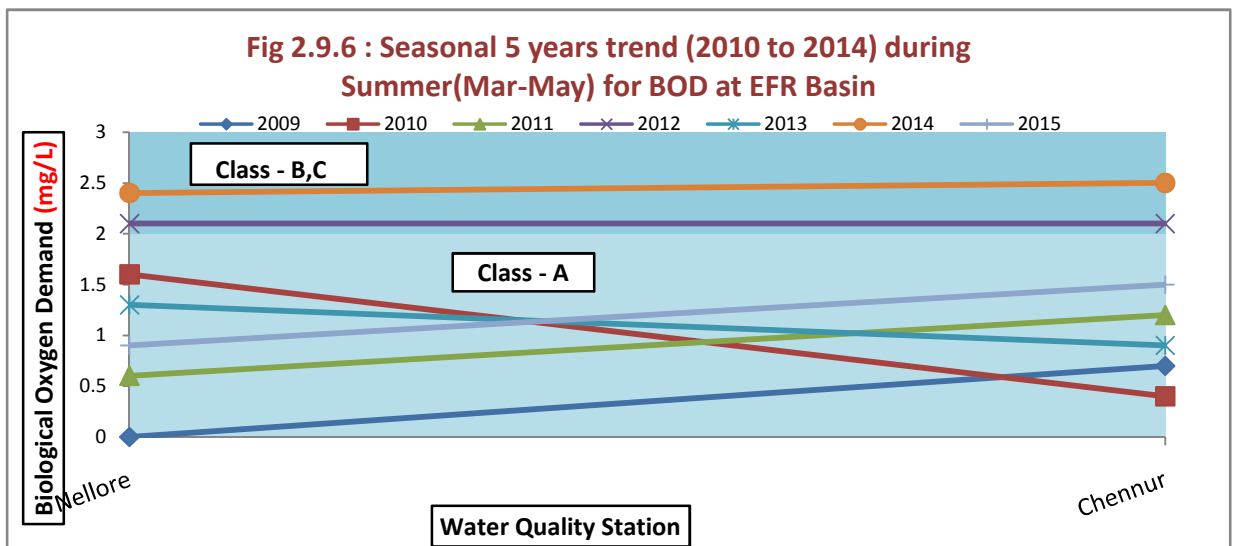
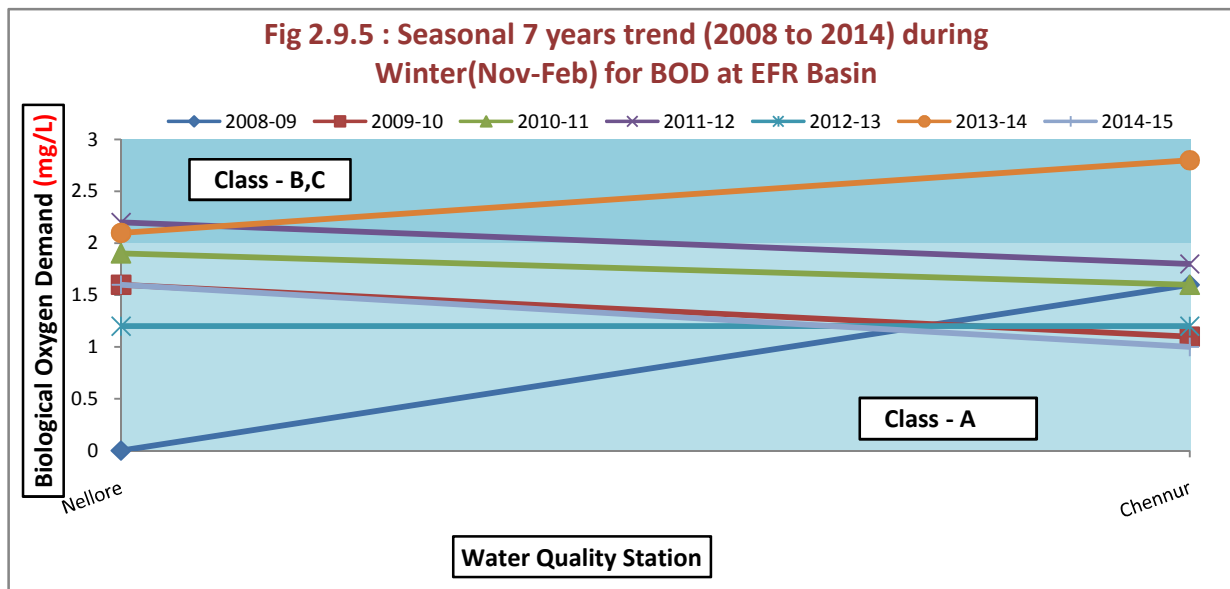
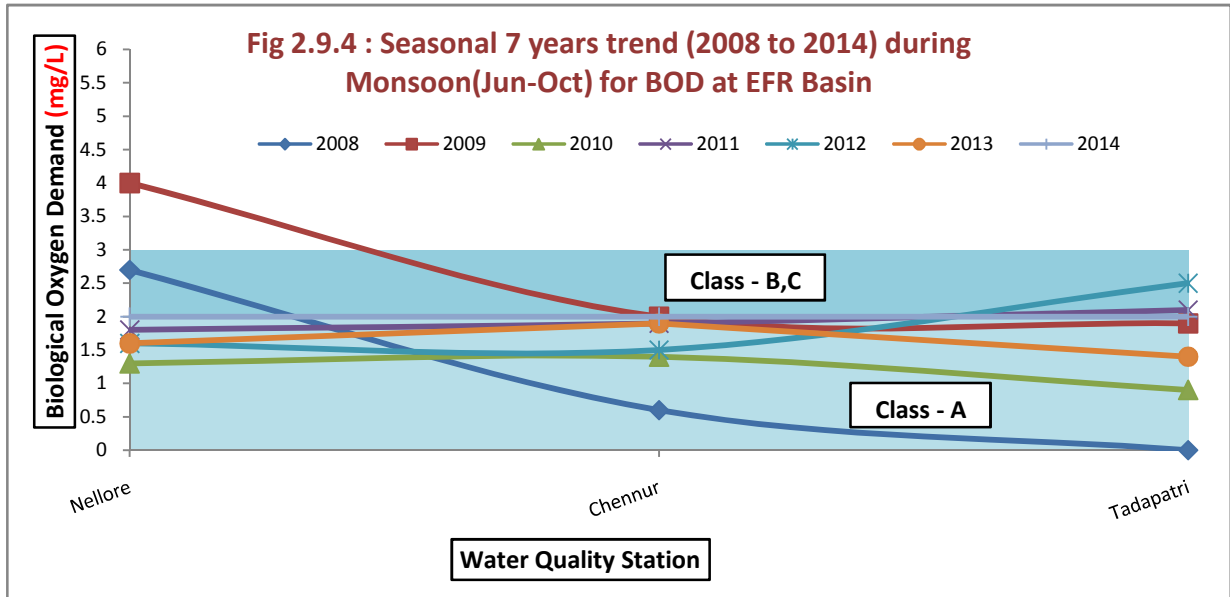
EFR from Pennar to Kanyakumari Flow Line Diagram



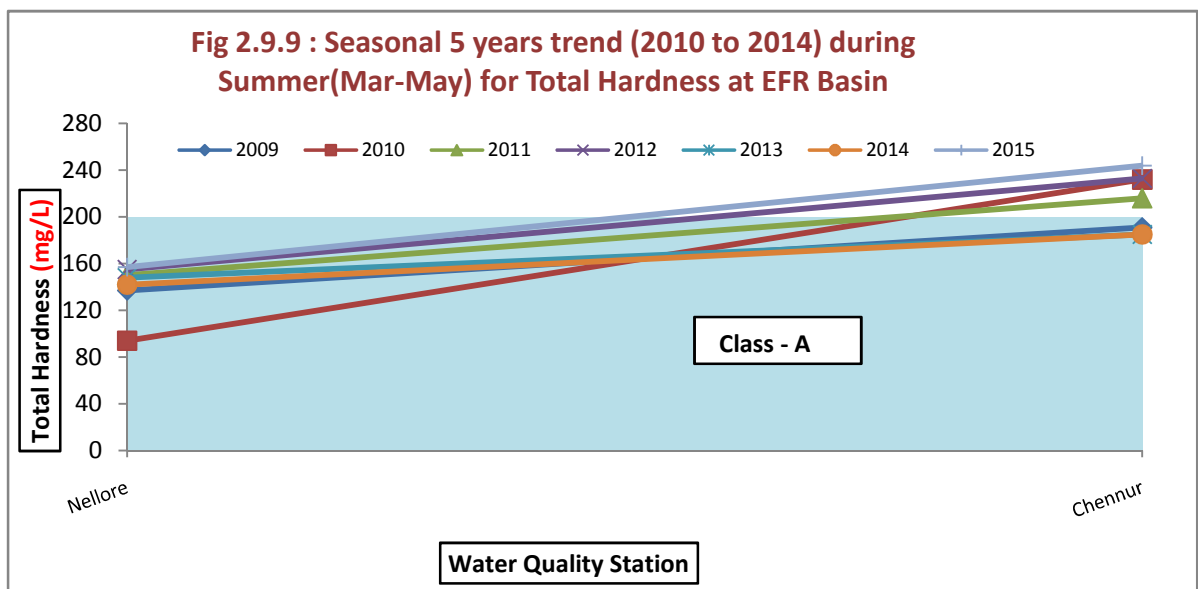
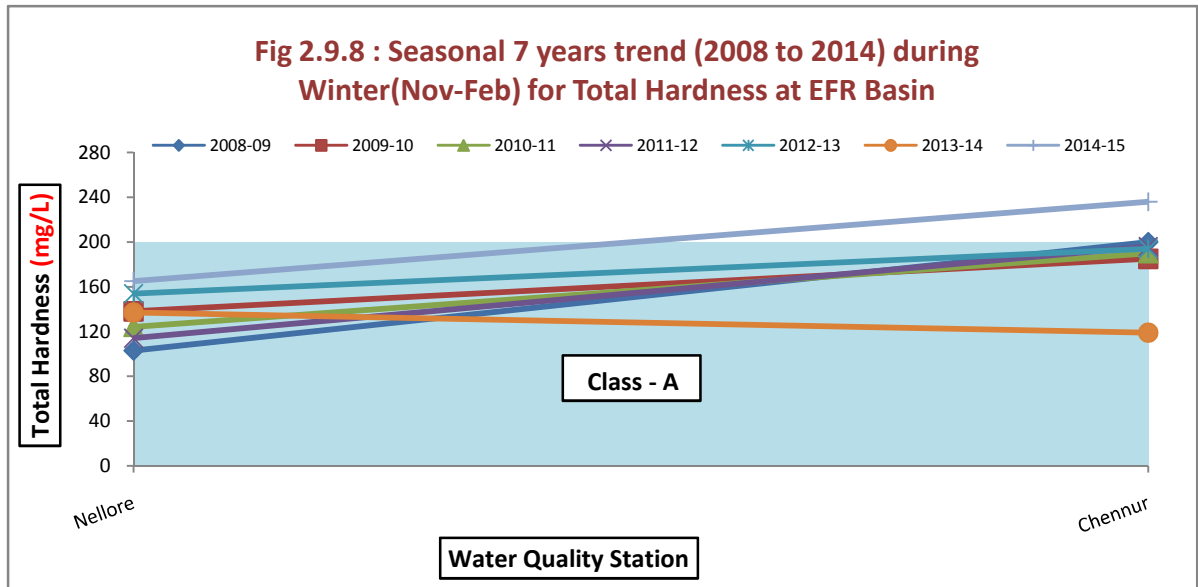
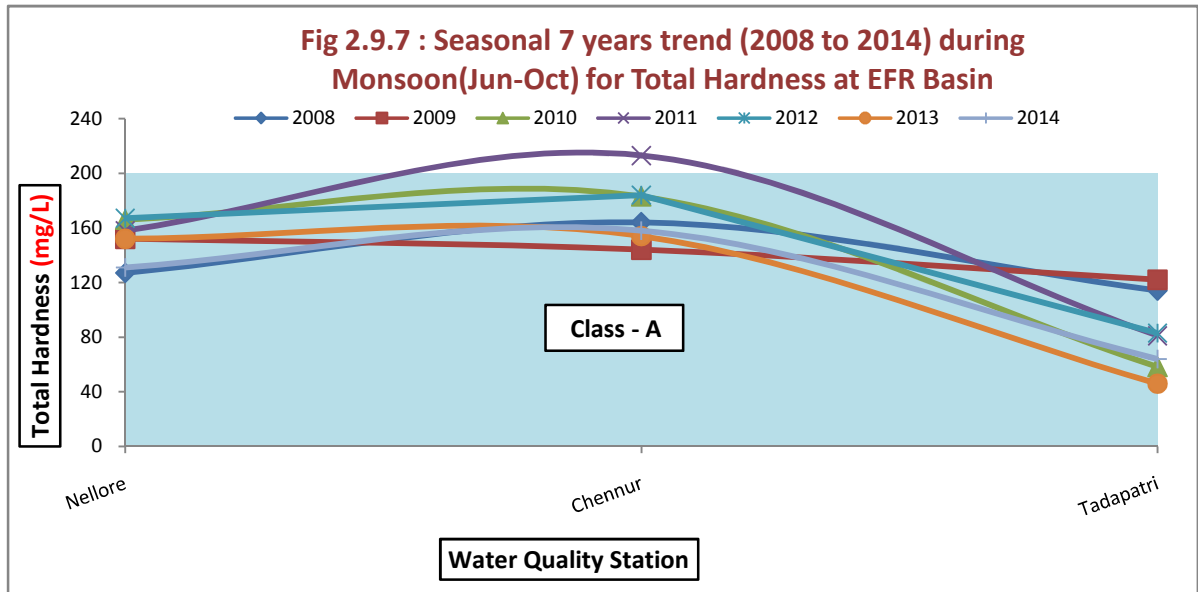
Basin: EFR from Pennar to Kanyakumari (Quality Parameter :pH)



Basin: EFR from Pennar to Kanyakumari (Quality Parameter : BOD)



Basin: EFR from Pennar to Kanyakumari (Parameter :Total Hardness)



2.9.14 Land Use Statistics: Table 2.9.2 to Table 2.9.4 present the land use pattern, gross irrigated area and net irrigated area for the basin as compared to all basins (Region-III).

TABLE 2.9.1: LAND UTILISATION PATTERN OF EFR BETWEEN PENNAR & KANYAKUMARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
efr between pennar and kanyakumari	101908.42	16005.67	23889.51	6349.40	21790.73	33873.11	6743.03	40616.14
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.9.2: GROSS AREA IRRIGATED BY SOURCES OF EFR BETWEEN PENNAR & KANYAKUMARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
efr between pennar and kanyakumari	2623.69	1.34	2625.03	3939.56	6094.99	9856.06	15951.05	51.27	22566.91
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.9.3: NET AREA IRRIGATED BY SOURCES OF EFR BETWEEN PENNAR & KANYAKUMARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
efr between pennar and kanyakumari	1987.26	1.27	1988.53	3671.66	4568.02	7516.15	12084.17	45.50	17789.86
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.9.15 Minerals: Important minerals found in the basin are Lime Stone, Sand Stone, Quartzite and Dolomite.

2.10 NARMADA BASIN

Location: The Narmada is the largest west flowing and fifth largest river of India. It drains an area of 98,796 sq km out of which nearly 87% lies in Madhya Pradesh besides some areas in the states of Maharashtra and Gujarat. The Narmada basin lies between east longitudes $72^{\circ} 32'$ to $81^{\circ} 45'$ and north latitudes $21^{\circ} 20'$ to $23^{\circ} 45'$. It flows through Deccan trap in between Vindhya and Satpura ranges of hills before flowing into the Gulf of Cambay in the Arabian Sea.

The Narmada originates from a Kund (spring) at an elevation of 1057m at Amarkantak in the Maikal hill in Shahdol district of Madhya Pradesh and flows through Madhya Pradesh, Maharashtra and Gujarat between Vindhya and Satpura hill ranges before falling into the Gulf of Cambay in the Arabian Sea, about 10 km north of Bharuch district of Gujarat. The total length of this west flowing river from its origin to its outfall into the Sea is 1,312 km. For the first 1,079 km, it runs in Madhya Pradesh and thereafter it forms the common boundary between Madhya Pradesh and Maharashtra for 35 km, and Maharashtra and Gujarat for 39 km. In Gujarat State, it stretches for 159 km. There are 41 important tributaries to the Narmada River. Significant among them are Burhner, Banjar, Hiran, Tawa, Chhota Tawa, Orsang and Kundi which are major tributaries having catchment area of more than 3,500 sq km. The remaining tributaries are having catchment areas ranging from 500 to 2,500 sq km. Temperature of Narmada basin is like any other part of Central India. In general, the upper Narmada basin records lower temperature as compared to middle basin.

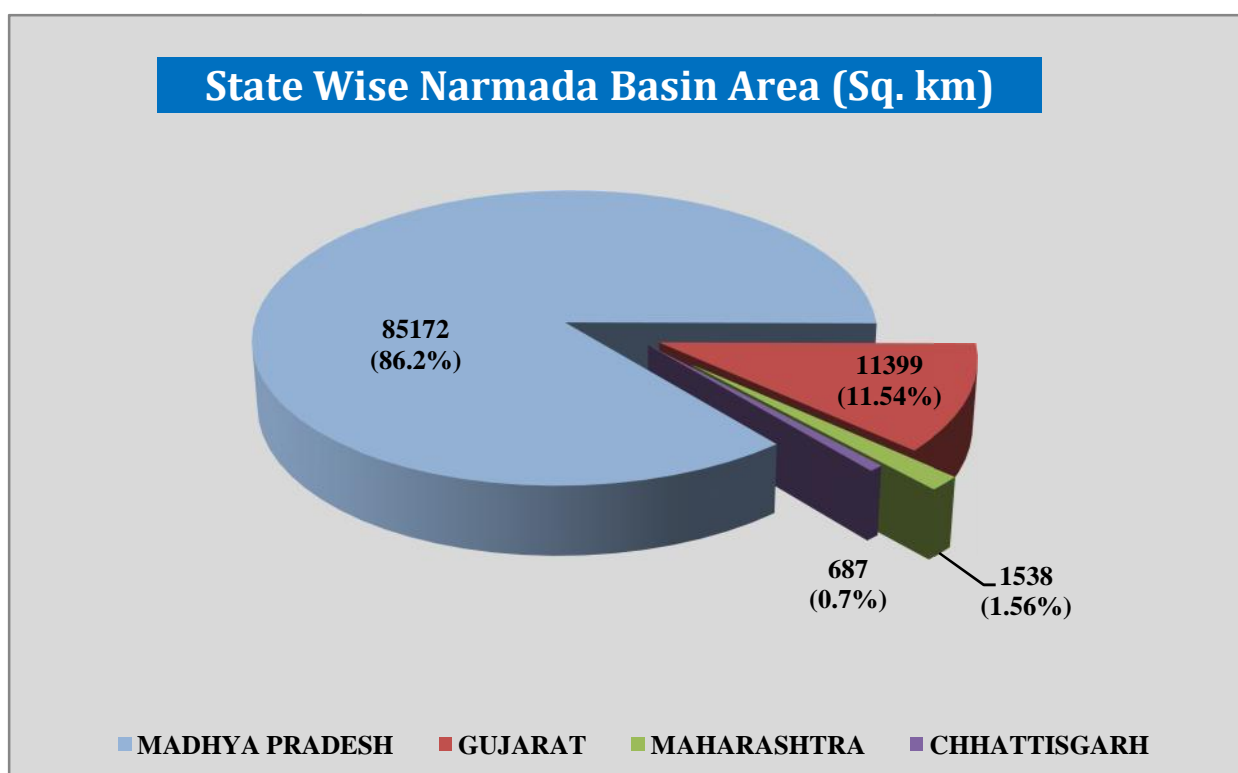
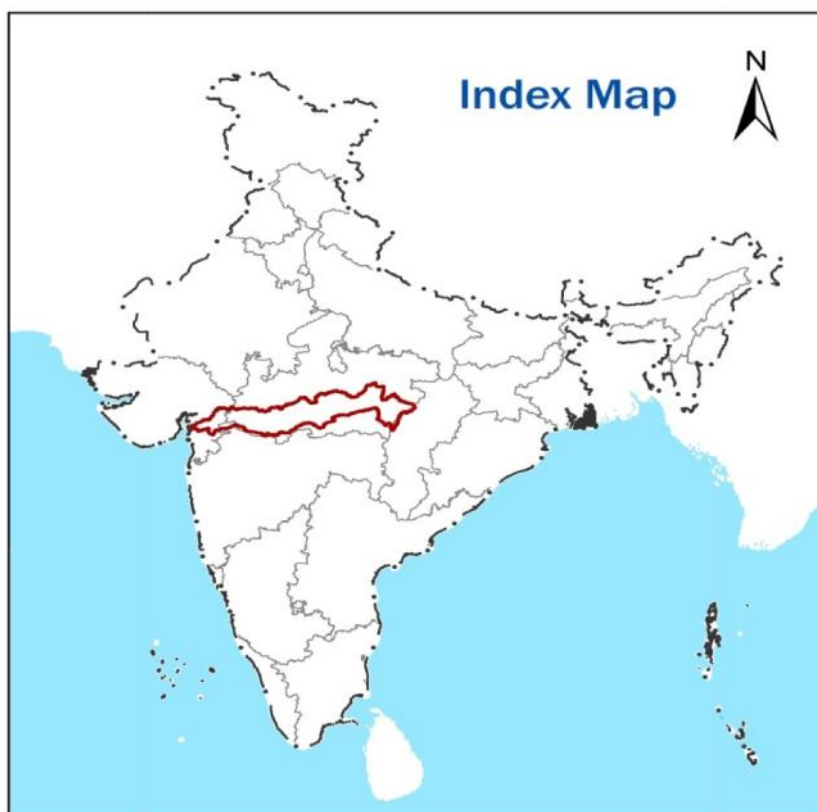
2.10.1 Irrigation Projects: Karjan, Sardar Sarover, Jobat, Man, Upper Beda, Maheshwar, Indira Sagar, Sukta, Kolar, Tawa, Barna, Bargi, Matiyari are the major projects in the catchment areas of the river basin.

2.10.2 Hydrological Observation Sites: There are total 19 H.O sites in the basin out of which 18 are for recording observations on Water Quality along with gauge and discharge. Sediment observations are made at 11 of these stations (as per 2014-15 data).

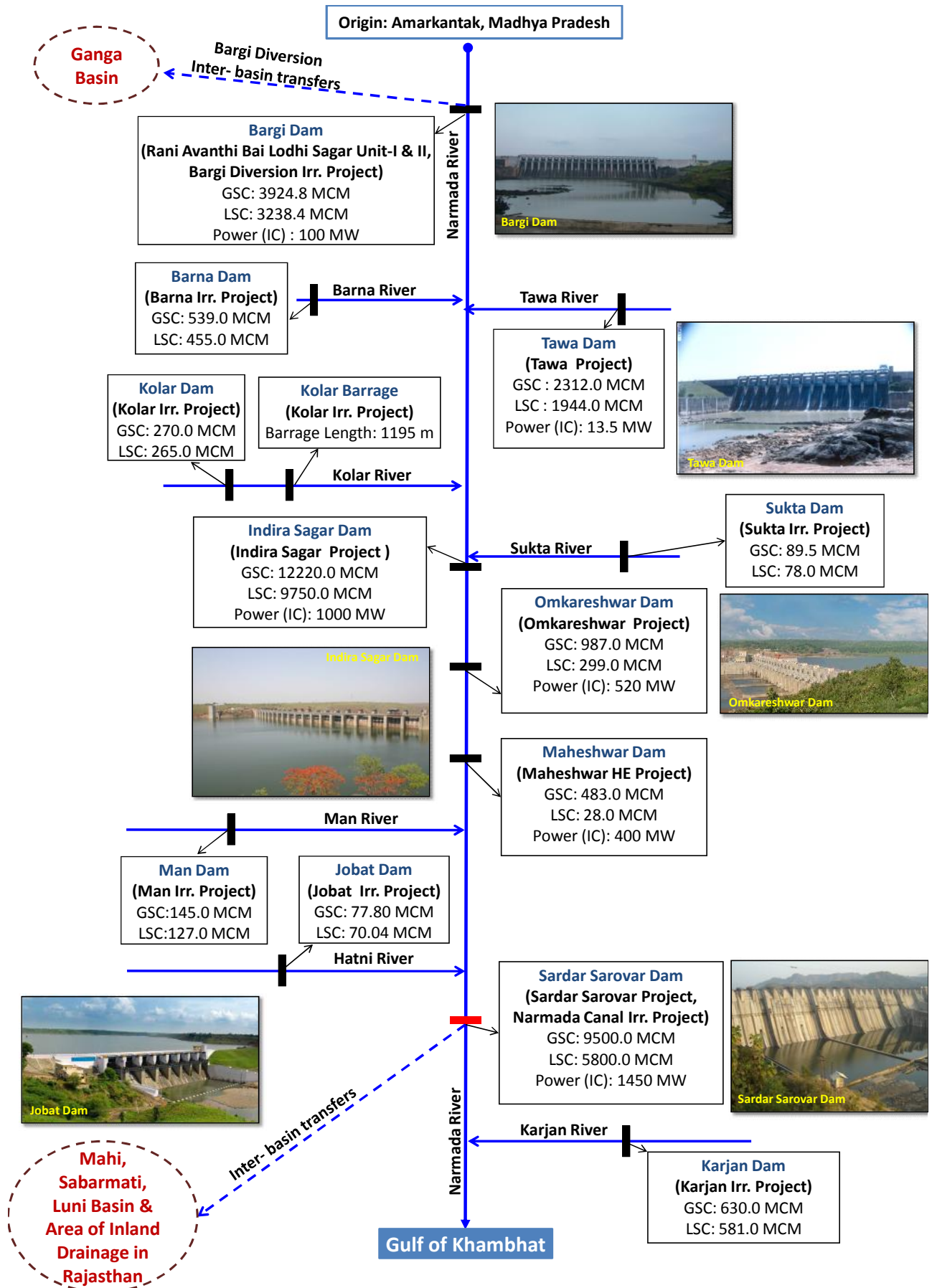
2.10.3 Peak Water Level: This basin contains 19 sites and has interesting fact that Dindori site which is situated at highest latitude and longitude registered the highest peak water level of the order of 669.64 metre on 23.08.1991 during the reference period 2014-15.

2.10.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for four sites of Narmada basin (Fig 2.10.1 to Fig 2.10.12).

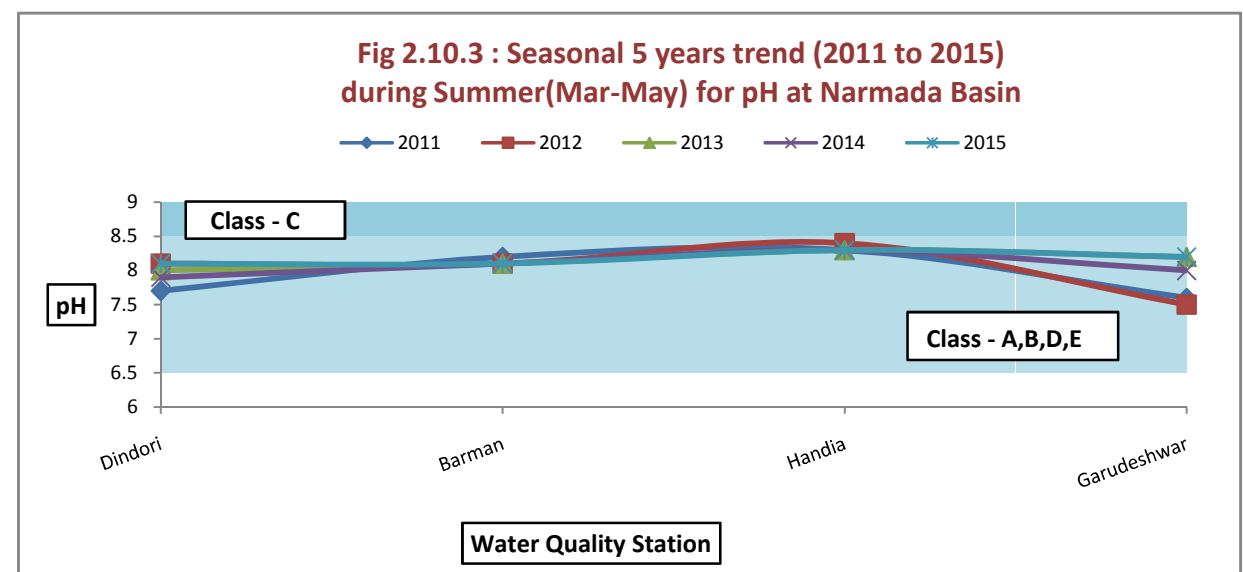
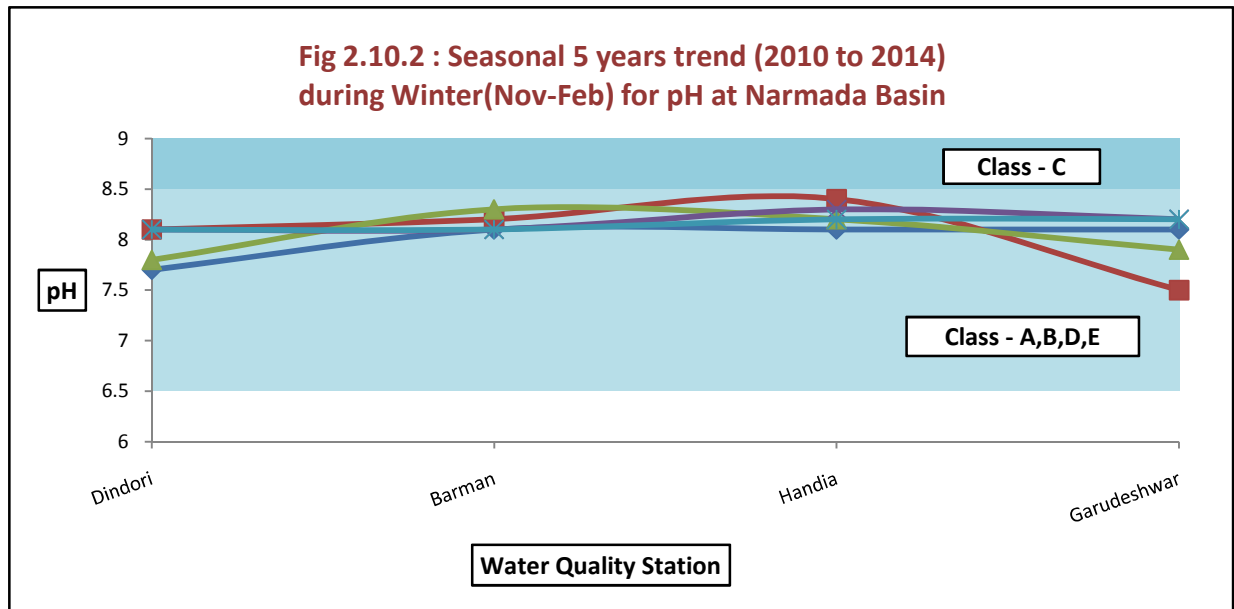
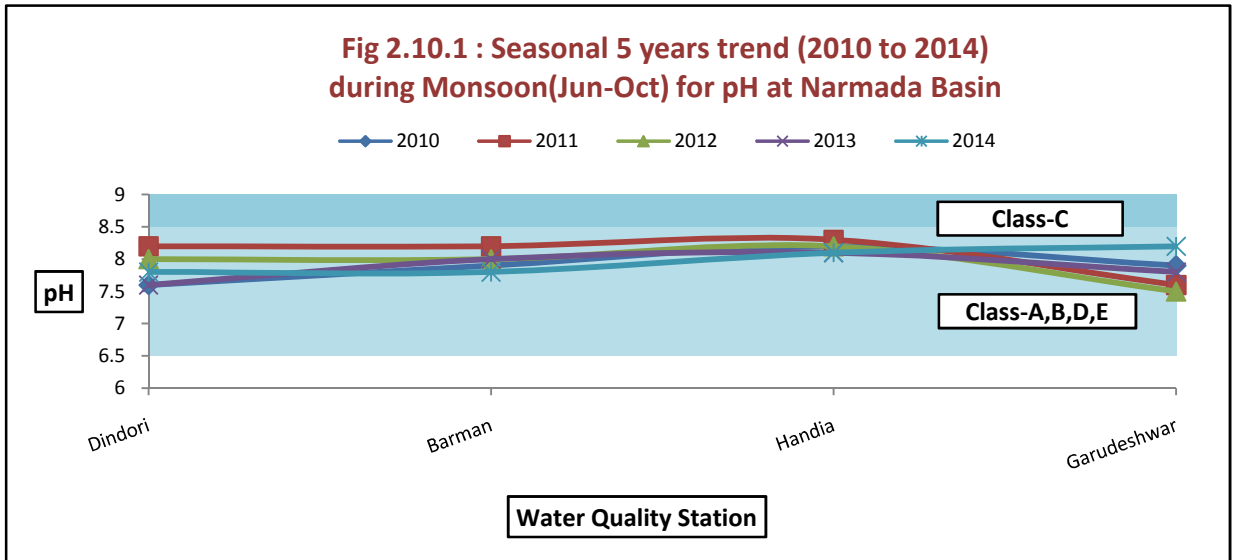




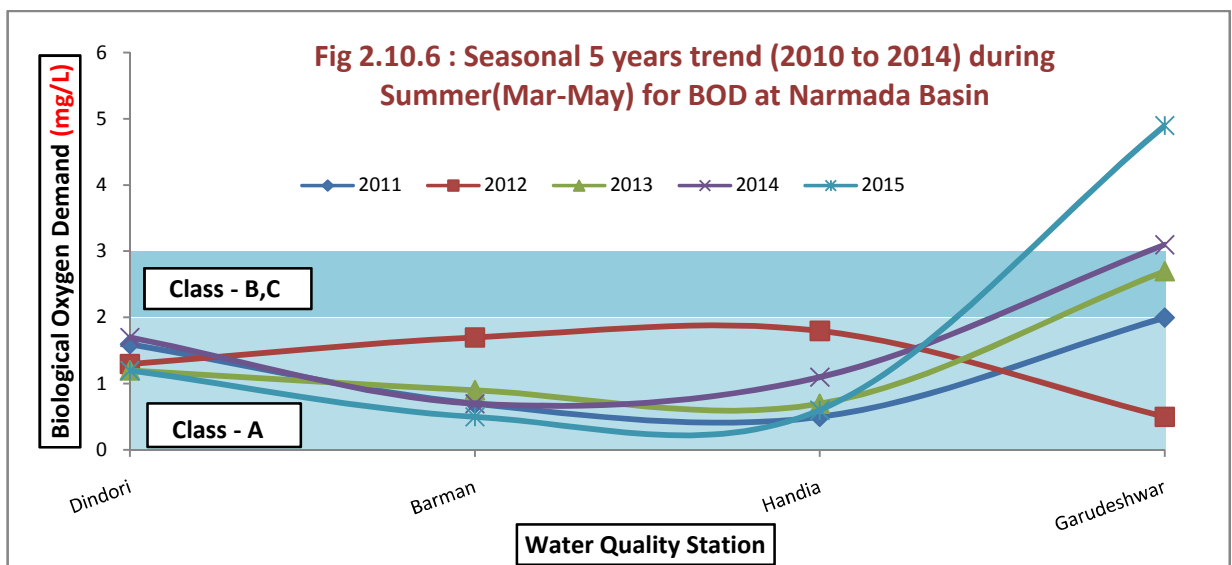
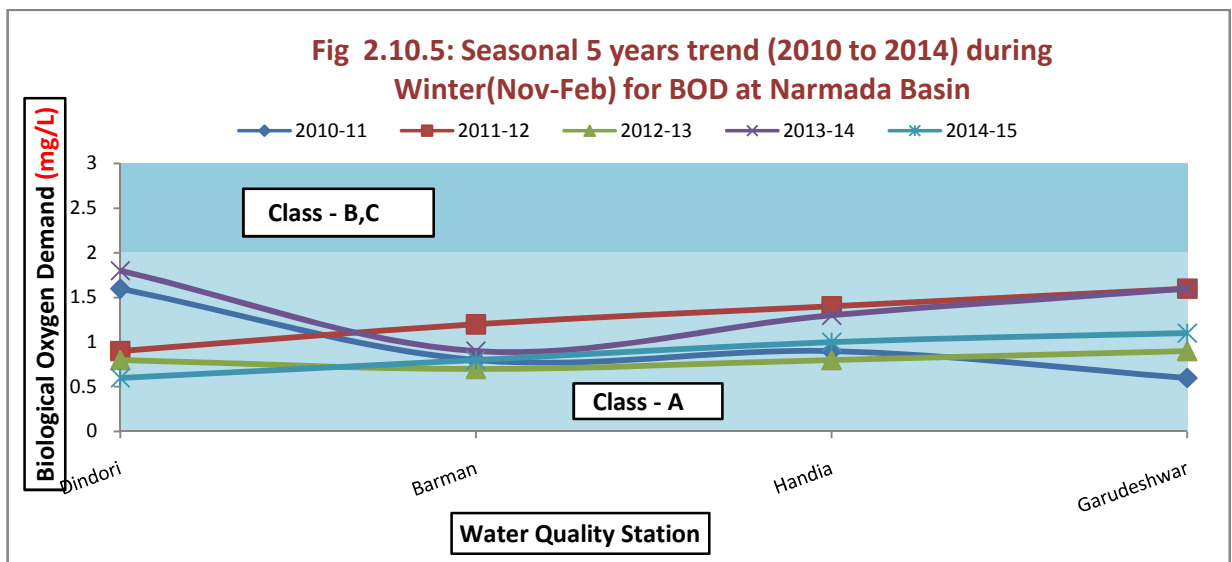
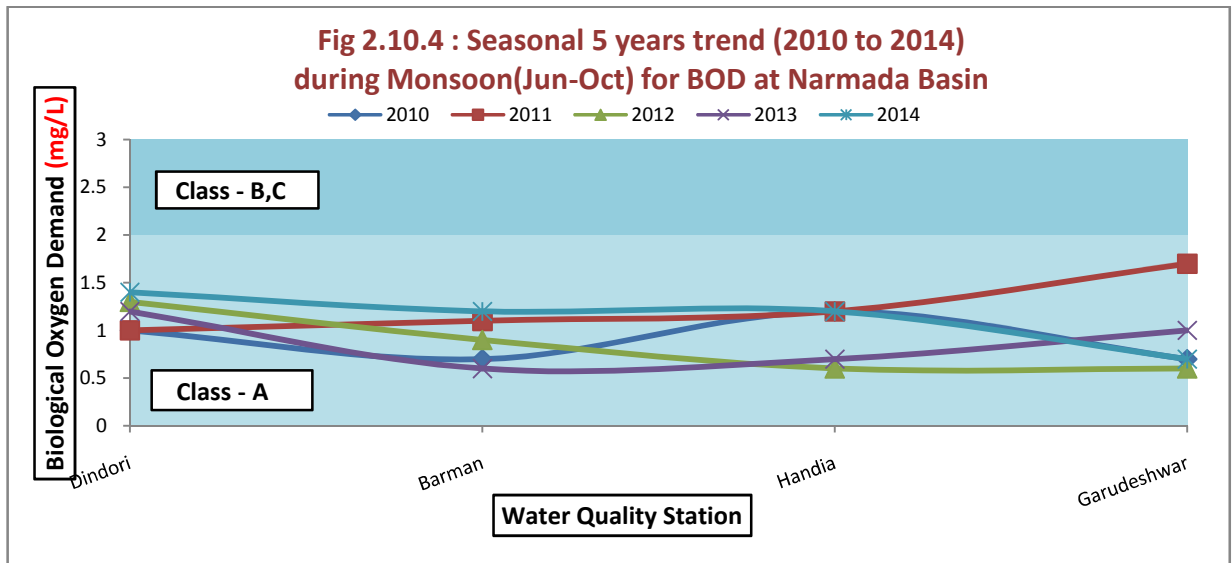
Narmada River Flow Line Diagram



Basin: Narmada (Water Quality Parameter : pH)



Basin: Narmada (Water Quality Parameter : Biological Oxygen Demand)



Basin: Narmada (Water Quality Parameter : Dissolved Oxygen)

Fig 2.10.7 : Seasonal 5 years trend (2010 to 2014) during Monsoon(Jun-Oct) for DO at Narmada Basin

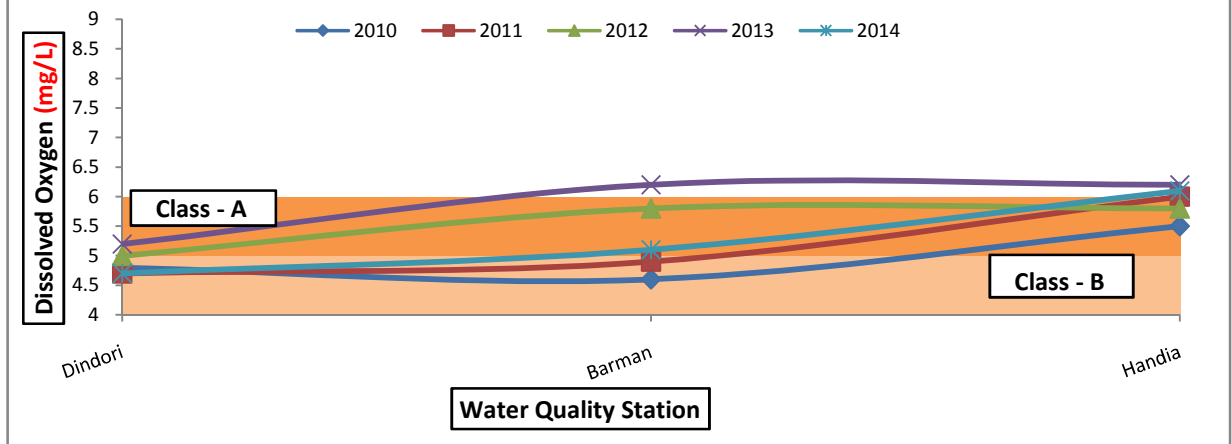


Fig 2.10.8 : Seasonal 5 years trend (2010 to 2014) during Winter(Nov-Feb) for DO at Narmada Basin

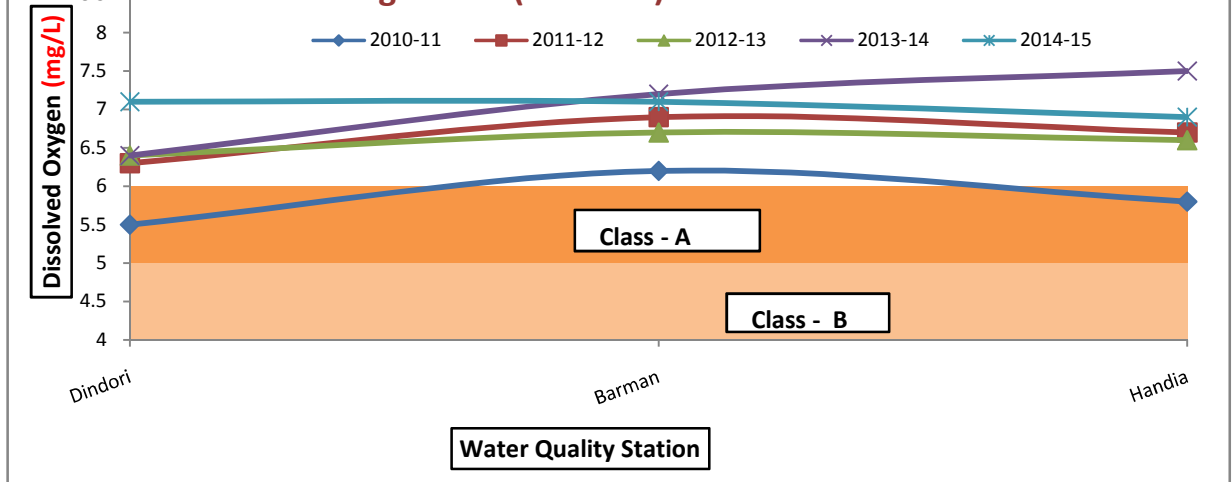
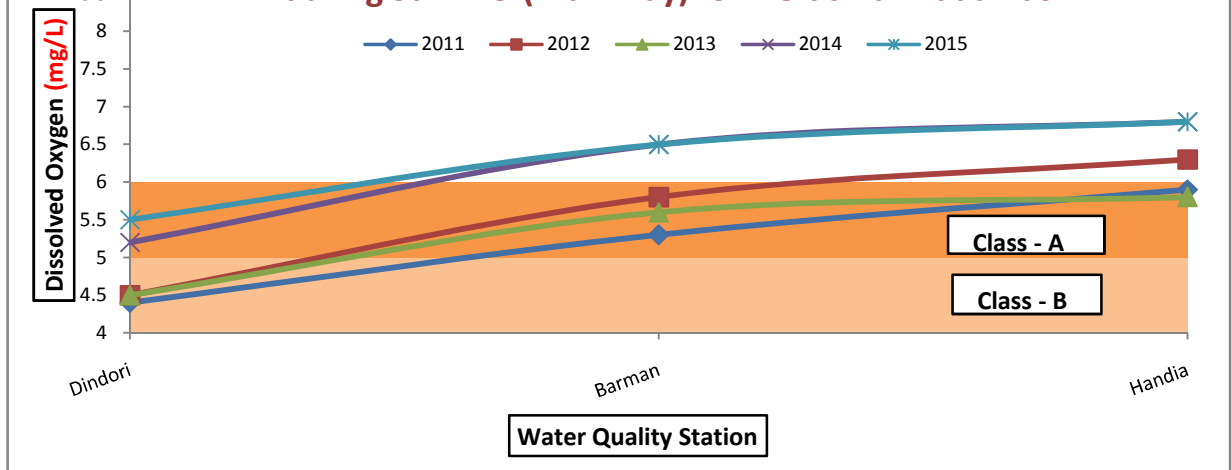


Fig 2.10.9 : Seasonal 5 years trend (2010 to 2014) during Summer(Mar-May) for DO at Narmada Basin



Basin: Narmada (Water Quality Parameter : Total Hardness)

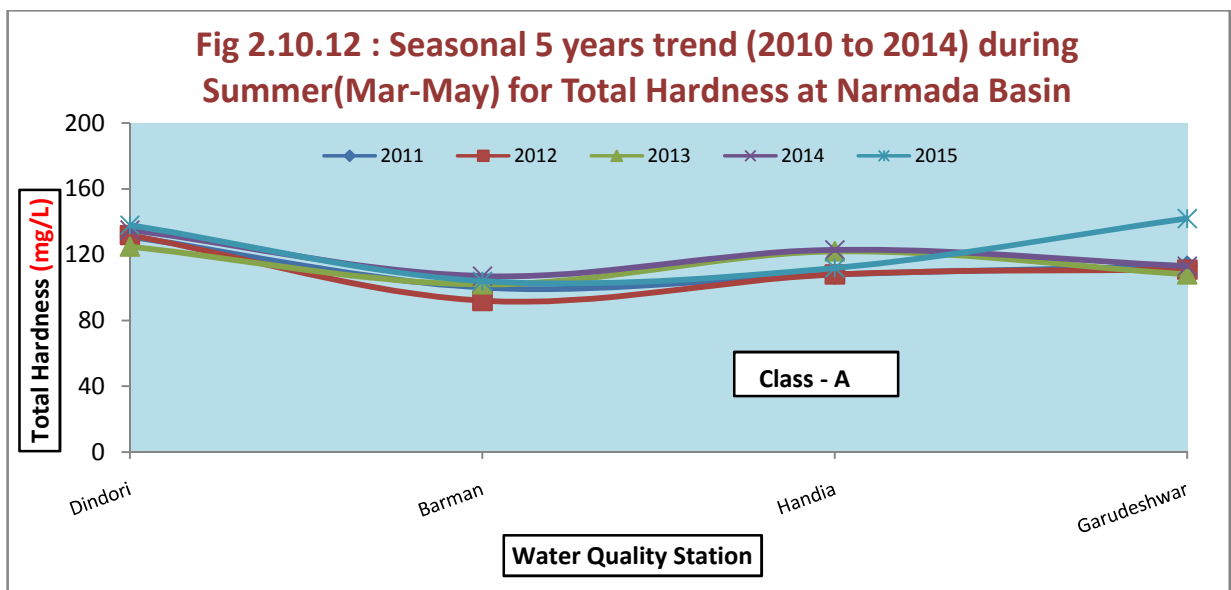
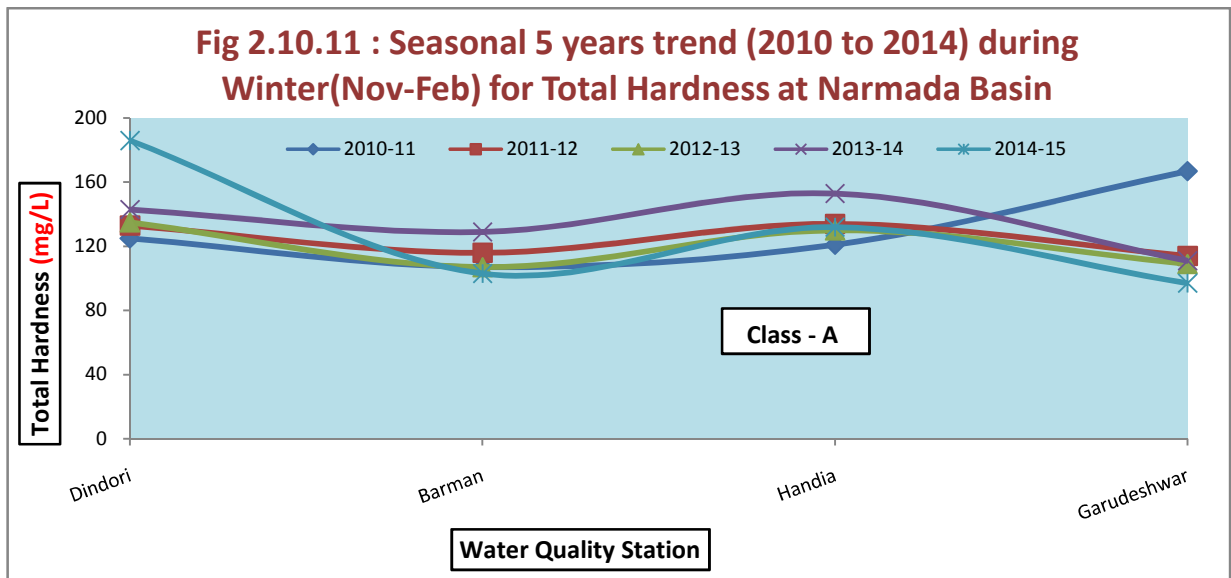
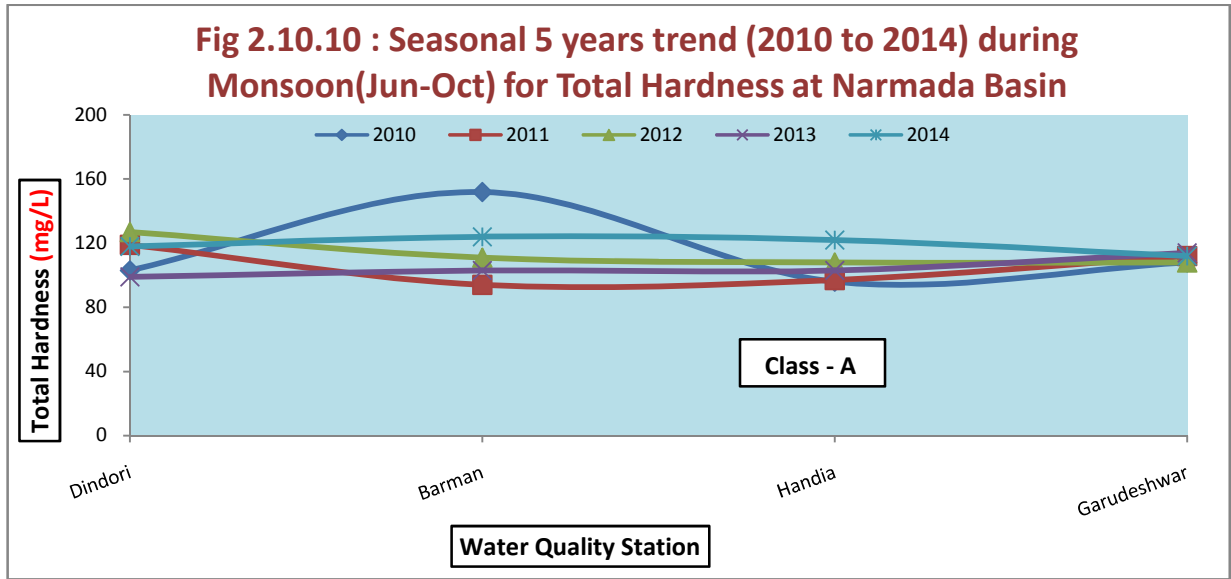
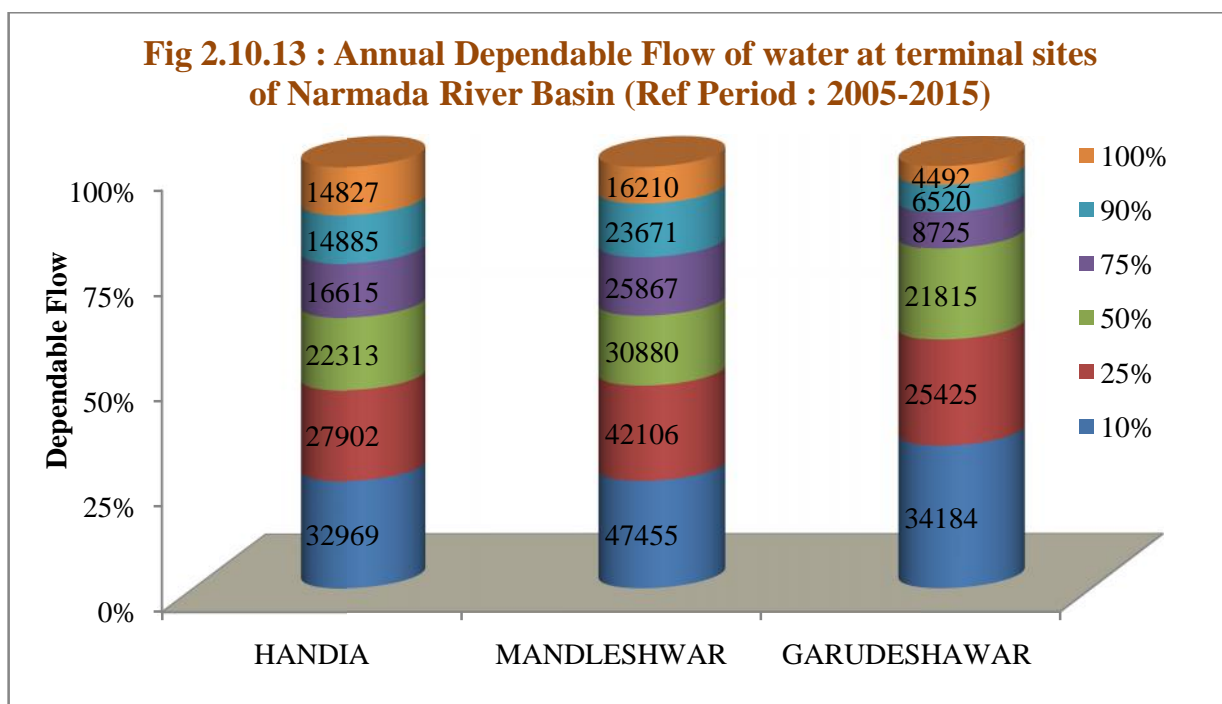


Table 2.10.1: Annual Dependable Flow Of Water at Terminal Sites Of Narmada Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	HANDIA	2005-06 to 2014-15	32968.50	27901.90	22312.70	16615.20	14884.70	14826.80
2	MANDLESHWAR		47455.20	42105.90	30879.70	25866.90	23671.40	16209.60
3	GARUDESRAWAR		34184.10	25424.50	21814.90	8724.70	6519.60	4492.30

Source SE(C),Govt. of India, CWC, Office of the Chief Eng., Narmada Basin Organization, Bhopal (MP) 2014-15 Narmada Basin.



2.10.5 Land Use Statistics: Table 2.10.2 to Table 2.10.4 present the land use pattern, gross irrigated area and net irrigated area for Narmada basin as compared to all basins (Region-III).

TABLE 2.10.2: LAND UTILISATION PATTERN OF NARMADA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Narmada	86993.13	29574.71	8607.90	5613.32	2394.66	40802.54	23364.05	64166.59
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.10.3: GROSS AREA IRRIGATED BY SOURCES OF NARMADA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Narmada	6678.02	1.89	6679.91	697.29	11506.51	8093.18	19599.69	3468.17	30445.06
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.10.4: NET AREA IRRIGATED BY SOURCES OF NARMADA AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

BASINS (REGION II) DURING 2014-15 (AREA IN SQ. KM.)									
Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Narmada	5612.68	1.89	5614.57	690.73	9664.42	7194.83	16859.26	3067.05	26231.60
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.10.6 Urban Centres: Jabalpur town is the main city in this basin. The second largest urban pocket in the Narmada Basin is Bharuch of Gujarat. Other urbanized centers are Khandawa of Madhya Pradesh.

2.10.7 Industries: There are few large scale and medium scale industries in the area. But as compared with other basins, industrialization is thin in this area.

2.10.8 Minerals: Important minerals found in the basin are Bauxite, Clay, coal, dolomite, graphite, iron ore, manganese, talc & limestone, etc.

2.11 TAPI BASIN

Location: The Tapi River is the second largest westward draining interstate river basin. It covers a large area in the State of Maharashtra besides areas in the states of Madhya Pradesh and Gujarat. The Tapi Basin is the northern-most basin of the Deccan plateau and is situated between latitudes $20^{\circ} 05' \text{ N}$ to $22^{\circ} 03' \text{ N}$ and longitudes of $72^{\circ} 38' \text{ E}$ and $78^{\circ} 17' \text{ E}$. The Satpura range forms its northern boundary whereas the Ajanta and Satmala hills form its southern extremity. Mahadeo hills form its eastern boundary. The basin finds its outlet in the Arabian Sea in the west. Bounded on the three sides by the hill ranges, the river Tapi, along with its tributaries, more or less flows over the plains of Vidharbha, Khandesh and Gujarat. The Tapi River drains an area of 65,145 sq km out of which nearly 80 percent lies in Maharashtra state.

The Tapi River originates near Multai in Betul district at an elevation of 752 metre above m.s.l. The total length of this west flowing river from its origin to its out fall into the sea is 724 km. For the first 282 km the river flows in Madhya Pradesh, out of which 54 km forms the common boundary with Maharashtra State. It flows for 228 km in Maharashtra before entering Gujarat. Traversing a length of 214 km in Gujarat, the Tapi River joins Arabian Sea in the Gulf of Cambay after flowing past the Surat city. The river receives tidal influence for a length of about 20 km upstream from the mouth.

The Tapi River receives several tributaries on both the banks. There are 14 major tributaries having a length more than 50 km. On the right bank, 4 tributaries namely the Vaki, Gomai, Arunavati and Aner join the Tapi River. On the left bank, 10 important tributaries namely the Nesu, Arunavati, Buray, Panjhra, Bori, Girna, Waghur, Purna, Mona and Sipna drain into the main channel. The drainage system on the left bank of the Tapi river is, therefore, more extensive as compared to the right bank area.

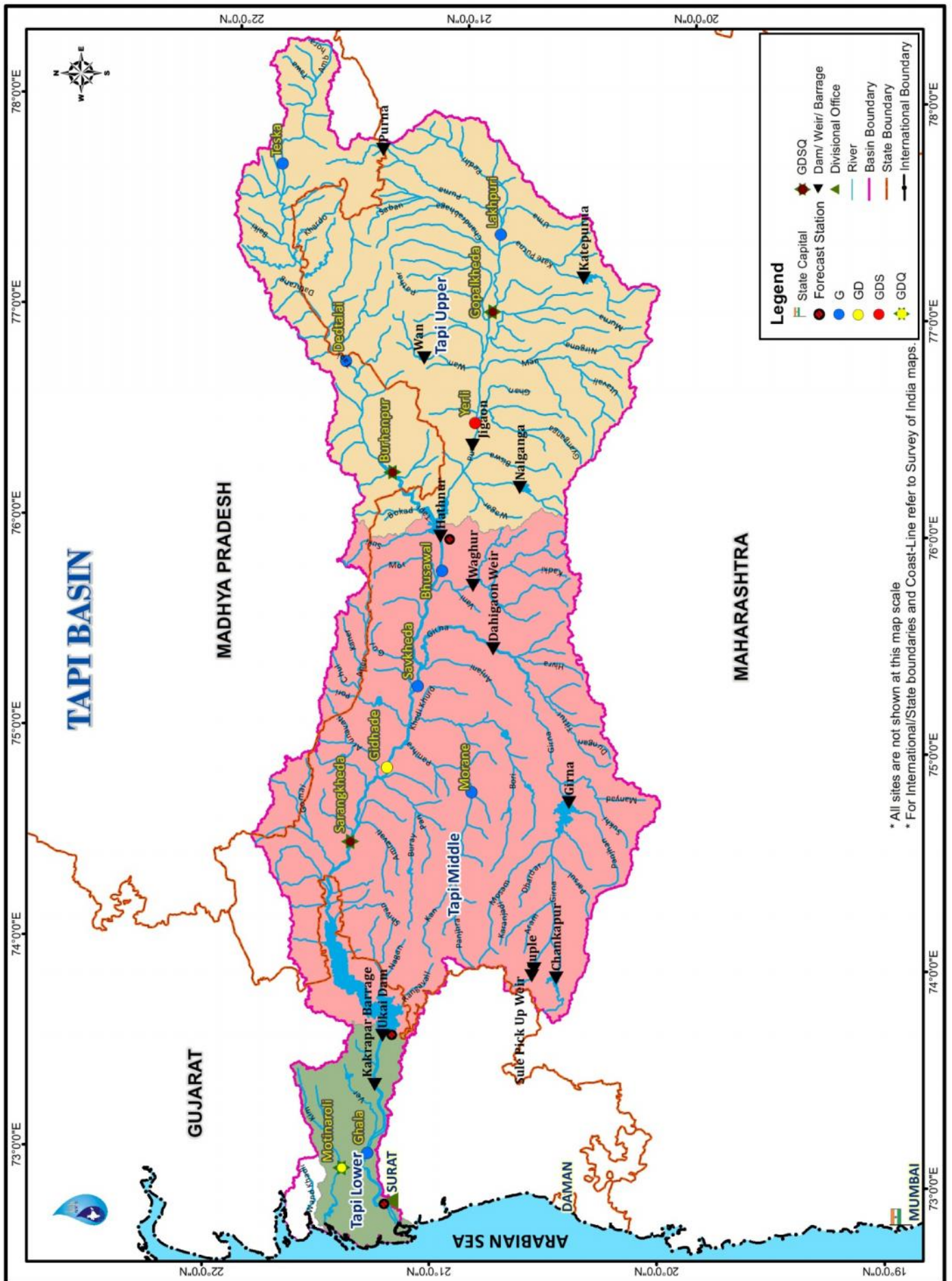
The Purna and the Girna, the two important left bank tributaries together account for nearly 45 percent of the total catchment area of the Tapi River. The Purna is the principal tributary of the Tapi River originating in Betul district in Gawilgarh hills of the Satpura range, mostly drains the three districts Amravati, Akola and Buldhana of Vidharbha Region. The Girna, another major tributary, rises in the Western Ghats and drains Nasik and Jalgaon districts of Maharashtra. The south-west monsoon sets in by the middle of June and withdraws by mid October. About 90% of total rainfall is received during the monsoon months, of which 50% is received during July and August.

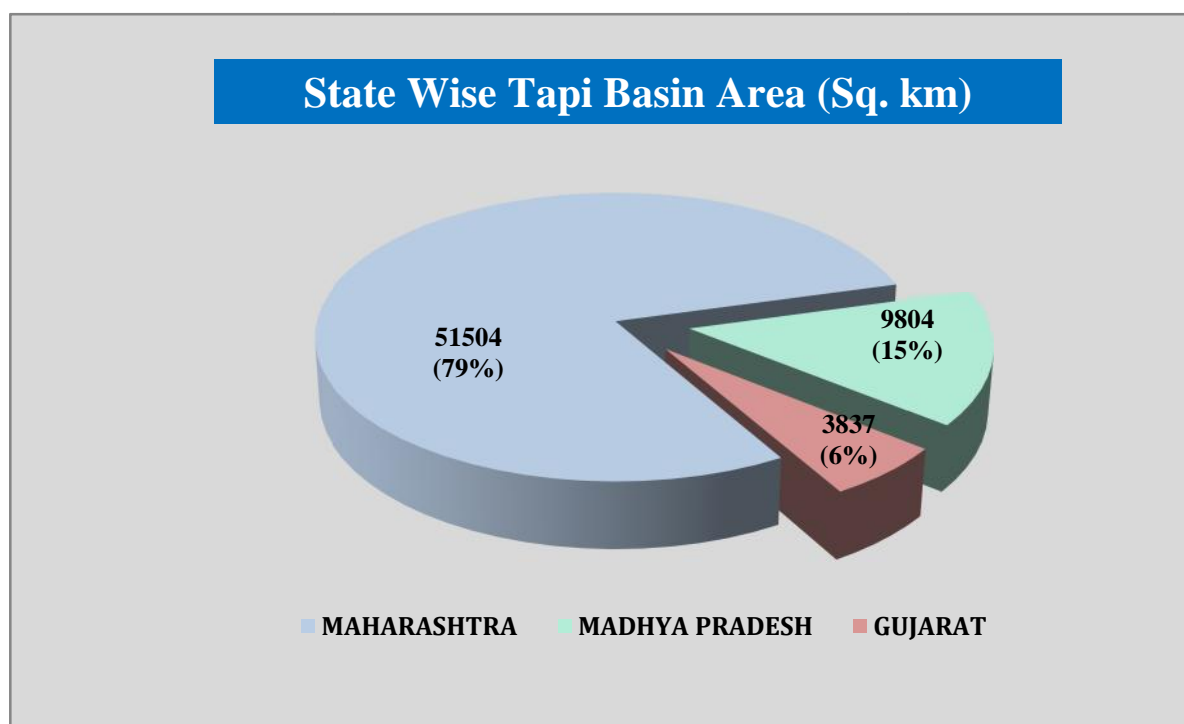
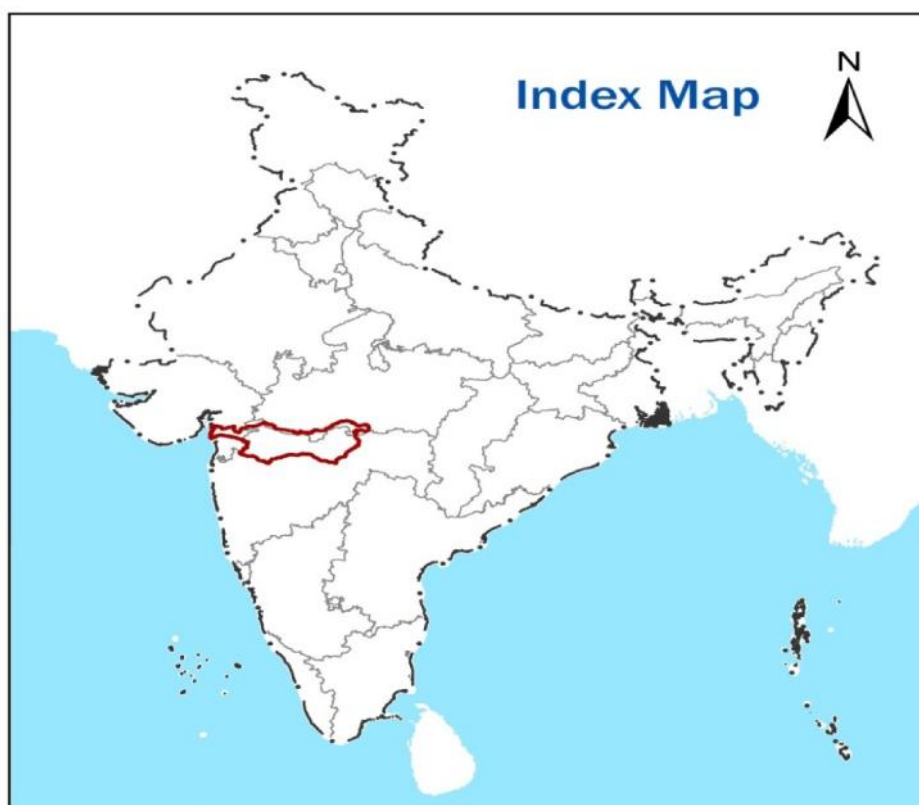
2.11.1 Irrigation Projects: The Ukai Dam, Kate Purna, Nalganga, Girna and Kakrapar Weir are the major projects in the catchment areas of the river basin.

2.11.2 Hydrological Observation Sites: There are 19 stations in total in the basin out of which 4 sites are for Water Quality along with gauge(18), discharge(6) and Sedimentation observations(4) (as per 2014-15 data).

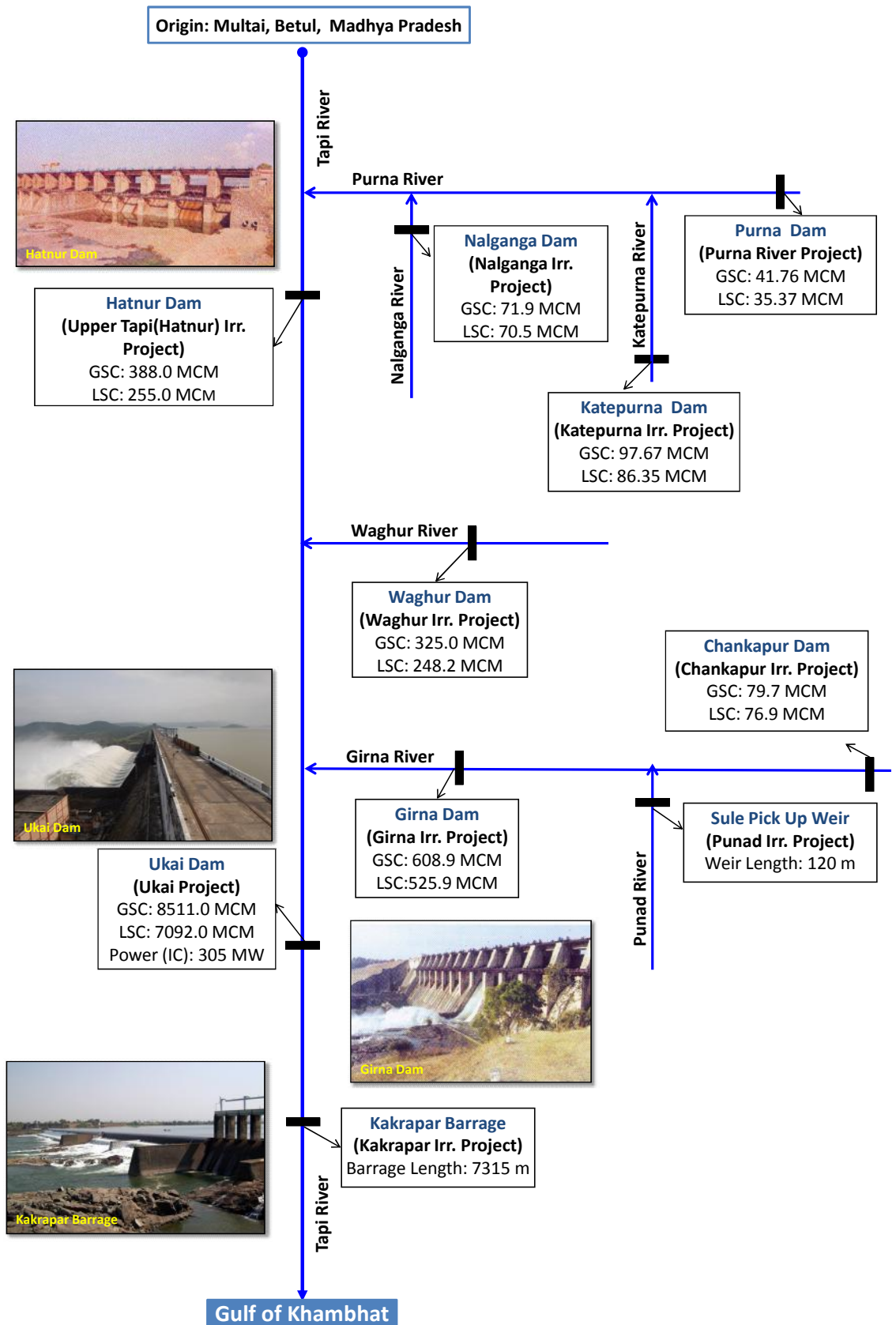
2.11.3 Peak Water Level: Tapi basin has reported only 6 sites, out of which Gopalkheda has the maximum peak water level at 252.1 metre during the reference period 2014-15.

2.11.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD are given below for two sites of Tapi basin (Fig 2.11.1 to Fig 2.11.2).



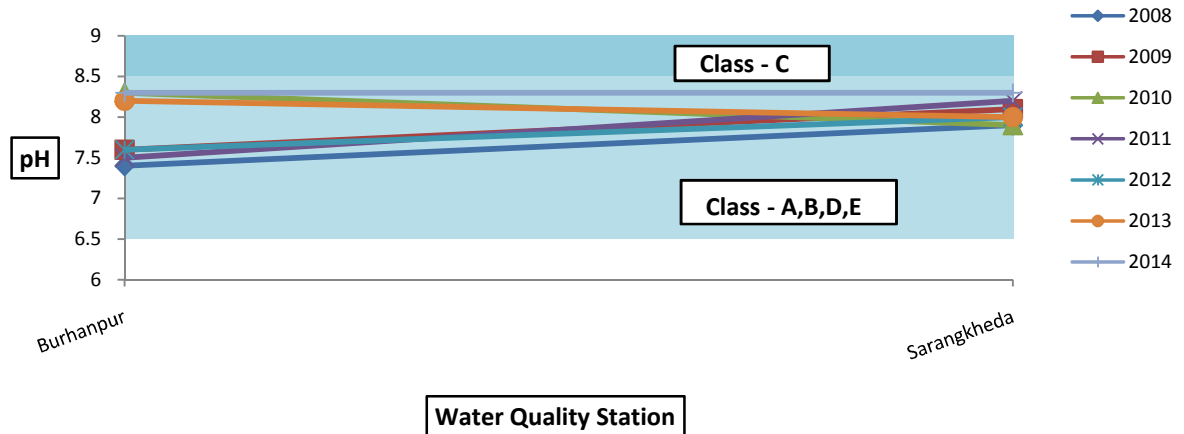


Tapi River Flow Line Diagram



Basin: Tapi (Water Quality Parameter : pH)

Fig 2.11.1 : Seasonal 7 years trend (2008 to 2014) during Monsoon(Jun-Oct) for pH at Tapi Basin



Basin: Tapi (Water Quality Parameter : BOD)

Fig 2.11.2 : Seasonal 7 years trend (2008 to 2014) during Monsoon(Jun-Oct) for BOD at Tapi Basin

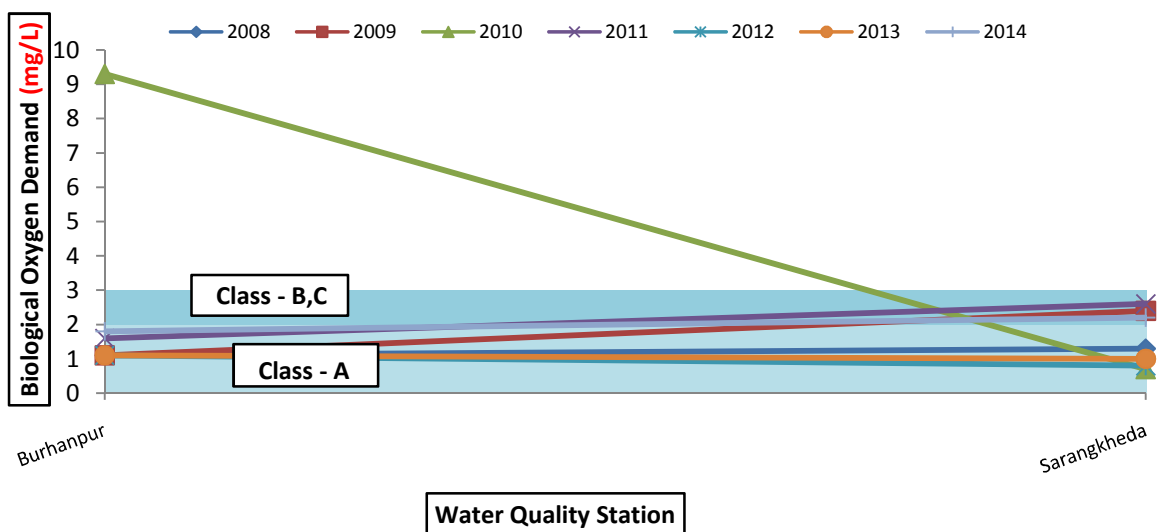
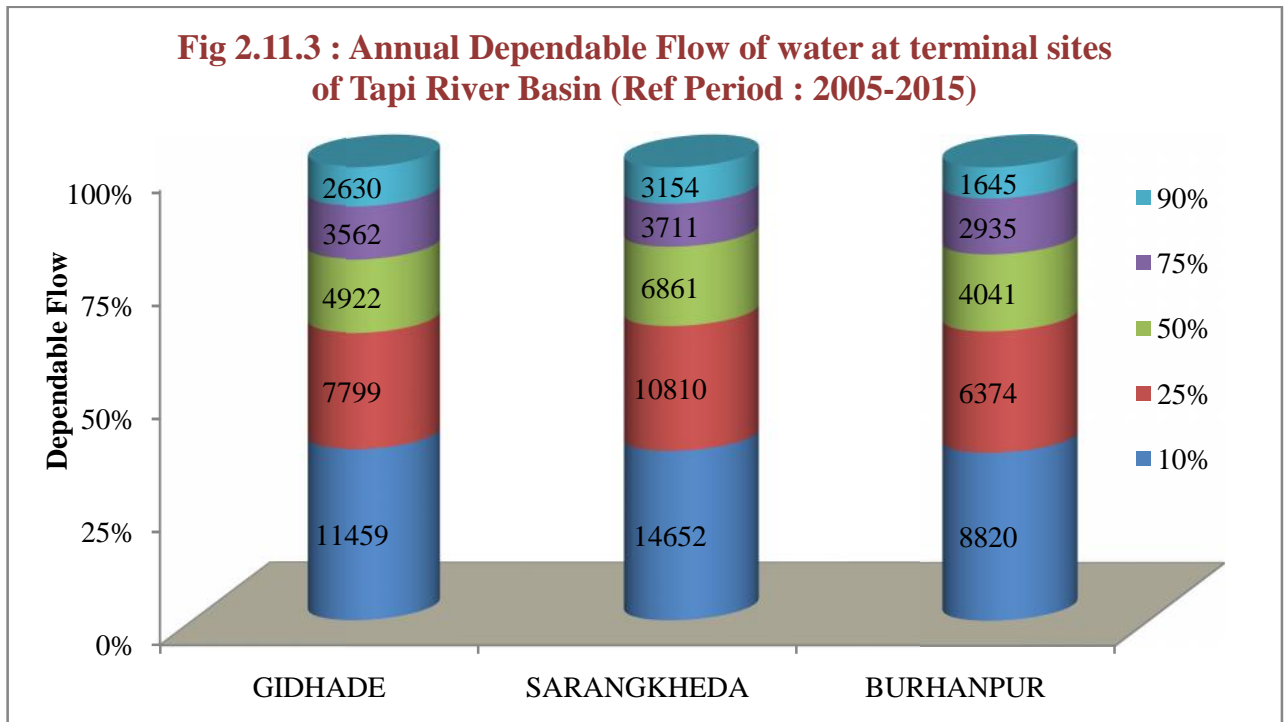


Table 2.11.1: Annual Dependable Flow of Water at Terminal Sites of Tapi Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	GIDHADE	2005-06 to 2014-15	11458.84	7798.83	4922.31	3561.69	2629.94	NA
2	SARANGKHEDA		14652.22	10809.81	6861.19	3710.71	3153.79	NA
3	BURHANPUR		8820.00	6373.81	4041.15	2935.22	1645.03	NA

Fig 2.11.3 : Annual Dependable Flow of water at terminal sites of Tapi River Basin (Ref Period : 2005-2015)

2.11.5 Land Use Statistics: Table 2.11.2 to Table 2.11.4 present the land use pattern, gross irrigated area and net irrigated area for Tapi basin as compared to all basins (Region-III).

TABLE 2.11.2: LAND UTILISATION PATTERN BY TAPI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Tapi	9635.09	4277.07	896.97	493.10	210.01	3757.94	1329.91	5087.85
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.11.3: GROSS AREA IRRIGATED BY SOURCES OF TAPI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Tapi	264.33	0.00	264.33	39.04	533.50	923.78	1457.27	271.77	2032.41
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.11.4: NET AREA IRRIGATED BY SOURCES OF TAPI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

BASINS (REGION III) DURING 2017-18 (AREA IN SQ. KM.)									
Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Tapi	241.08	0.00	241.08	39.04	519.04	895.25	1414.30	254.82	1949.24
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.11.6 Urban Centres: Surat is the most important city in the area. Other cities are Amravati, Akola, and Jalgaon.

2.11.7 Industries: Important industries in the basin are Paper Mills and Sugar Mills. Other industries are Cotton Spinning Mills, Dal, Oil and Wood cutting Mills.

2.12 WEST FLOWING RIVERS FROM TAPI TO TADRI BASIN

Location: The basin of West flowing rivers consists of all small independent river basins of peninsular India lying to the south of Krishna basin, except Cauvery basin draining into Arabian Sea. There are about 31 major and minor rivers basins in this region.

The basin of the West Flowing Rivers located in the South West corner of the peninsular India covers areas in the states of Maharashtra, Karnataka, Tamilnadu and Kerala. There are a number of medium and minor river basins in this region. All the rivers originate from the high mountains of the Western Ghats and exhibit similar characteristics. They have steep high banks, which rarely overflow or cause floods. Important west flowing river sub-basins are described as under.

2.12.1 Ulhas: The Ulhas River is one of the West Flowing rivers in Maharashtra falling into the Arabian Sea. The boundary of the basin consists of the main Sahyadri hills on the east, western off shoots on the north and south and on the west, a narrow opening at the end leading to the sea. The Ulhas basin lies between north latitudes of $18^{\circ} 44'$ to $19^{\circ} 42'$ and east longitudes of $72^{\circ} 45'$ to $73^{\circ} 48'$. The Ulhas drains an area of 4,637 sq km and lies completely in Maharashtra. The Thane, Raigad and Pune districts fall in the basin. The Ulhas rises from Sahyadri hill ranges in the Raigad district of Maharashtra at an elevation of 600m above msl. The total length of the Ulhas from its origin to its outfall in to the Arabian Sea is 122 km. The basin receives most of the rainfall from South-West monsoon during June to October. The important tributaries of the Ulhas River are Pej, Bhalla, Barvi, Salpe and Bhivapuri. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.12.2 Kal: The Kal River is a major tributary to river Savitri originates from the Sahyadri hill ranges in the Raigad district of Maharashtra. It drains an area of 670 Sq.Km which lies completely in Raigad district. The total length of this river from its origin to its confluence with the Savitri is 40 Km. Water quality station on this river is established at **Mangaon**, where water quality observations are being carried out from 02.07.1993.

2.12.3 Kajvi: The Kajavi River rises in the Vishalghat region of Sahyadri hills and flows West ward and joins the Arabian Sea near Ratnagiri port where a 10 km long creak named Bhatya Creak has been formed. During monsoon, tidal effect is felt up to village Hercheri that is about 25 km. from the mouth of river. The nature of Bed is sandy mixed with gravels. The H.O. site is at Anjanari village in Lanja Taluk of Ratnagiri District of Maharashtra State.

2.12.4 Gad: The Gad originates from the Sahyadri hill ranges in the Sindhudurg district of Maharashtra state. It drains an area of 890 Sq.Km and has a length of 66 Km from its origin to its out fall into the Arabian Sea. The only water quality on this basin at Adavali has been shifted to **Belne Bridge** in June 2000.

2.12.5 Mandovi: The Mandovi River is one of the main West Flowing Rivers of Goa State. The Mandovi Basin lies between north latitudes of $15^{\circ} 15'$ to $15^{\circ} 40'$ and east longitudes of $73^{\circ} 15'$ to $73^{\circ} 45'$ approximately. There are two CWC Hydrological Observation Stations located at Ganjim & Collem. The Mandovi River drains an area of 1,550 sq km. The Mandovi River rises in the Jamboti Ghats in Karnataka State. At the origin, near the village Mabulyesheir, it is known as Bhaburnal, which is at an elevation of 600m above M.S.L. The total length of this West Flowing River is 62 km. The important tributaries are Sarang, Mahainada, Udel, Lohi, and Khandepar. The average rainfall in the Mandovi Basin is 3,484 mm. The lowest and

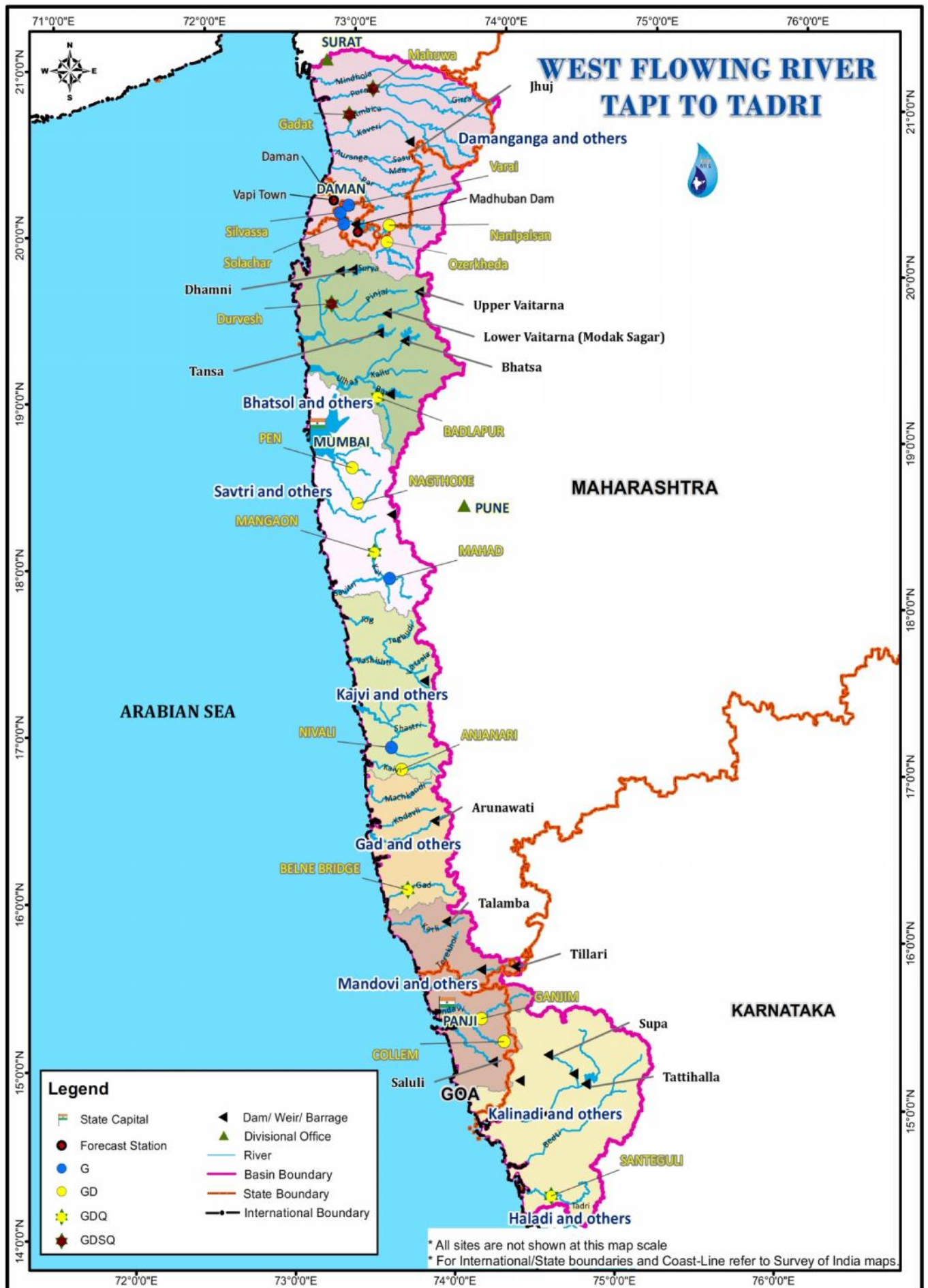
highest temperatures recorded are 9.30° C during January 1937 and 42.6° C during March 1959 respectively.

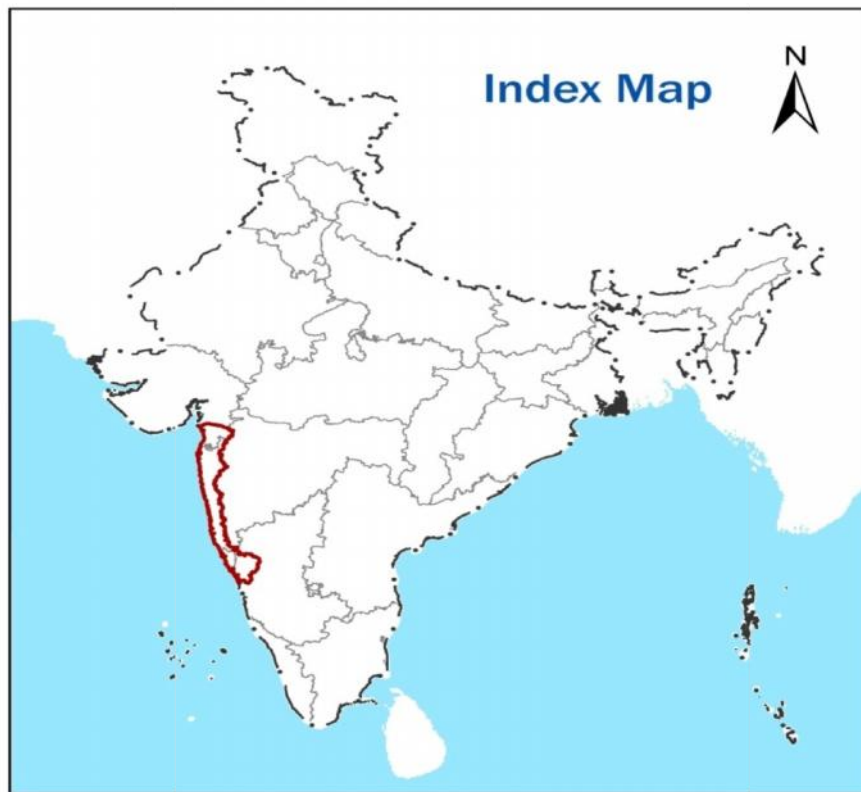
2.12.6 Aghanashini: The River Aghnashini originates from Gadihalli in the Western Ghats of Karnataka. The river has a catchment area of 1350 Sq.Km. and its total length is 117 Km. The river flows mostly through forest area and the only water quality station on this river is at *Santeguli*. Water Quality Monitoring of this basin commenced with the introduction of Water Quality observations at Santeguli with effect from 01.09.1993.

2.12.7 Irrigation Projects: The Anjunem in the sub-basin of Mandovi, Kal in the sub-basin of Kal, Swarna Dam in the sub-basin of Swarna, Kattampally in the sub-basin of Valapatanam, Malampuzha Reservoir, Tirumurthi and Aliayar in the sub-basin of Bharathapuzha, Chalakudi River Diversion Scheme, Sholayar H.E.S and Peringilkuthu Left Bank Scheme in the sub-basin of Chalakudi, Periyarvalley Project, Edamalayar and Idukky Hydel Project in the sub-basin of Periyar, Pamba Hydel Project in the sub-basin of Pamba, Kalada Irrigation Project in the sub-basin of Kalada are the major projects in the catchment areas of the west flowing river basin.

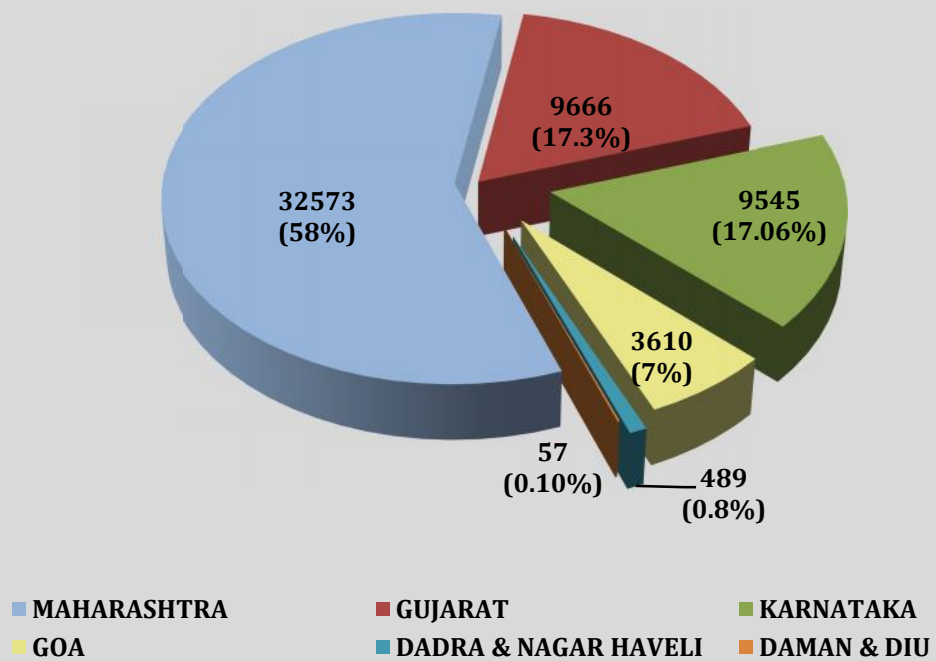
2.12.8 Hydrological Observation Sites: There are 37 sites in the basin for recording observations on water quality, gauge and discharge and sedimentation. Sediment observations are made at 22 of these stations (as per 2014-15 data).

2.12.9 Peak Water Level: This basin has reported information in respect of 9 sites during the reference period 2014-15. The peak water level of the sites remains in two digits for all sites. At Collem site, the peak water level touched at 71.55 metre on 10.08.2008.





State Wise WFR from Tapi to Tadri Basin Area (Sq. km)



WFR from Tapi to Tadri Flow Line Diagram

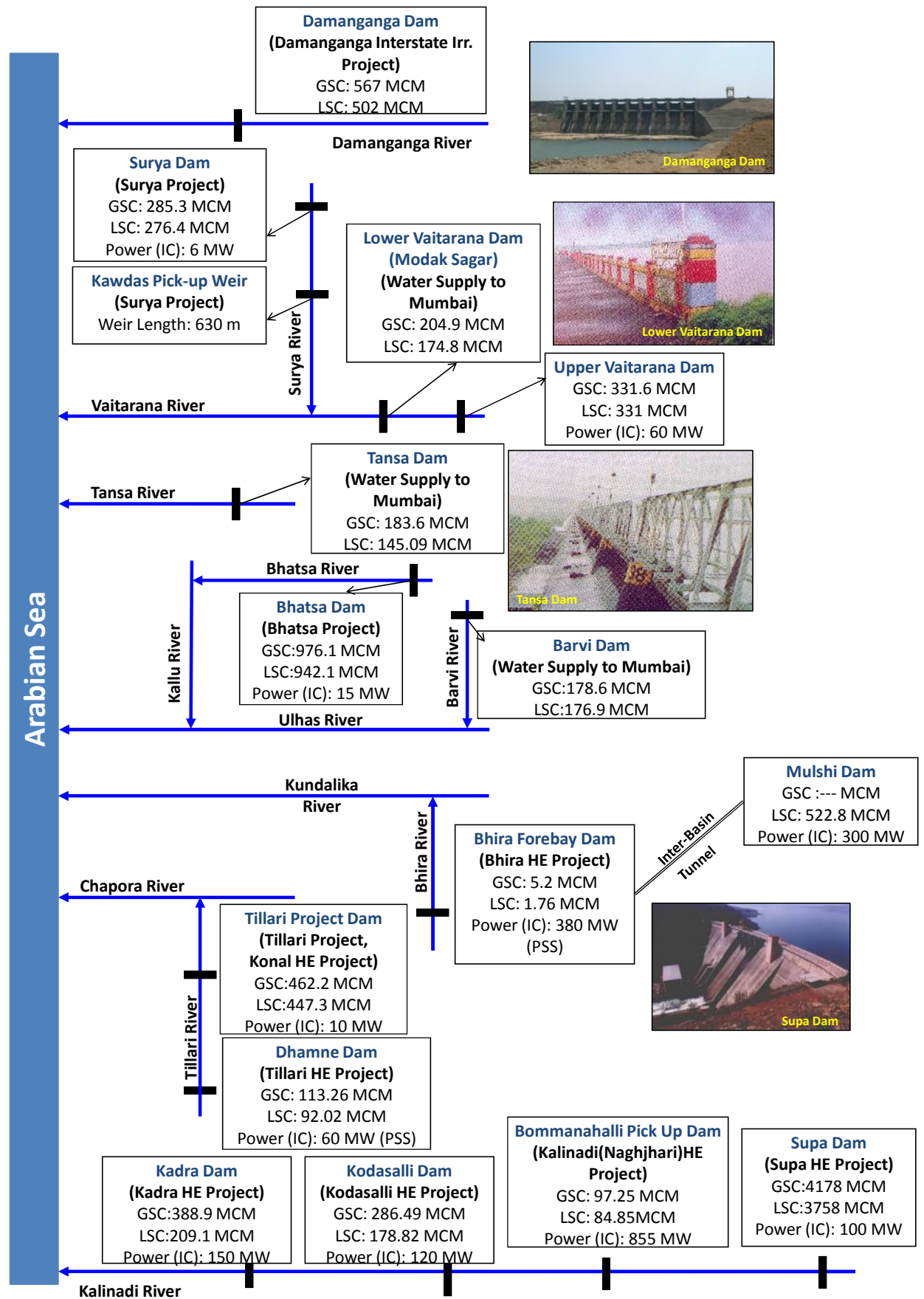
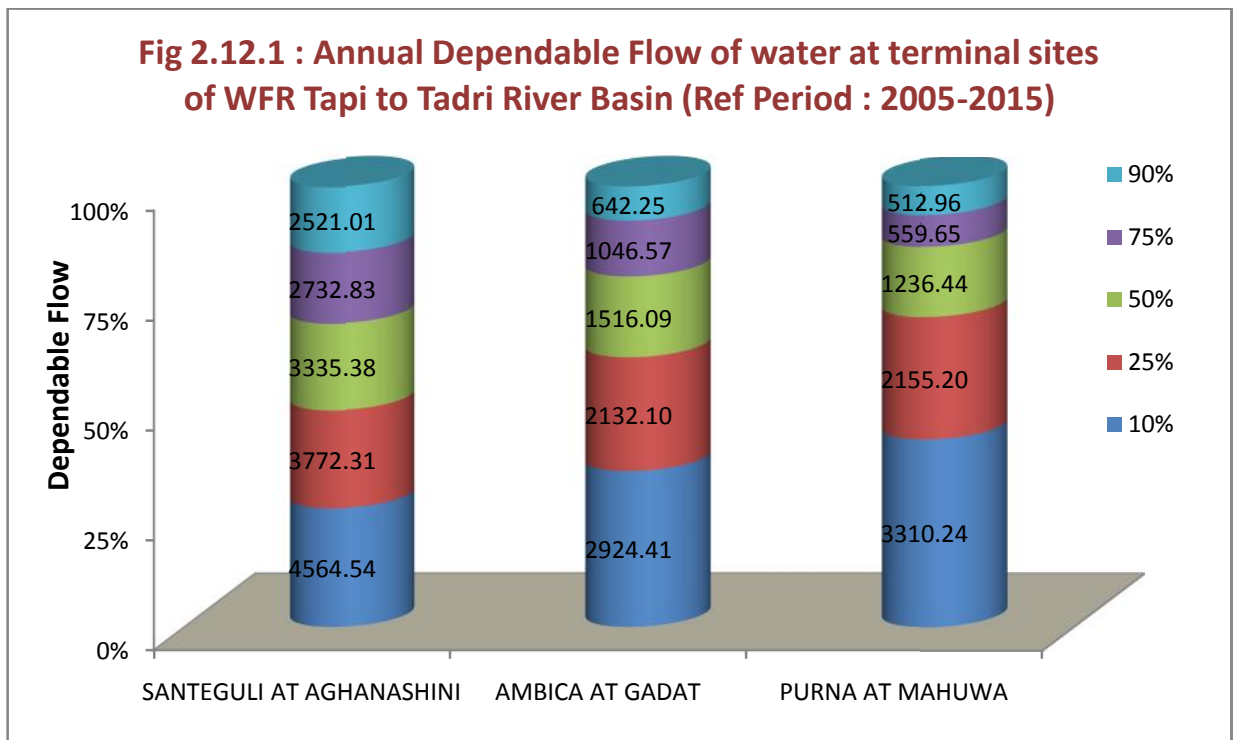


Table 2.12.1: Annual Dependable Flow Of Water at Terminal Sites Of WFR tapi to Tadri Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	SANTEGULI AT AGHANASHINI	6/2005 to 5/2015	4564.54	3772.31	3335.38	2732.83	2521.01	NA
2	AMBICA AT GADAT		2924.41	2132.10	1516.09	1046.57	642.25	NA
3	PURNA AT MAHUWA		3310.24	2155.20	1236.44	559.65	512.96	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore



2.12.10 Land Use Statistics: Table 2.12.2 to Table 2.12.4 present the land use pattern, gross irrigated area and net irrigated area for the basin as compared to all basins (Region-III).

TABLE 2.12.2: LAND UTILISATION PATTERN OF WFR TAPI TO TADRI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
WFR tapi to tadri	15205.97	8488.53	1021.60	845.94	664.19	4185.71	1103.96	5289.67
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.12.3: GROSS AREA IRRIGATED BY SOURCES OF WFR TAPI TO TADRI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
WFR tapi to tadri	272.74	0.00	272.74	261.21	373.18	258.34	631.52	311.88	1477.35
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.12.4: NET AREA IRRIGATED BY SOURCES OF WFR TAPI TO TADRI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
WFR tapi to tadri	225.62	0.00	225.62	258.83	321.03	231.90	552.93	280.75	1318.12
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source: Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.13 WEST FLOWING RIVERS FROM TADRI TO KANYAKUMARI BASIN

Location: The basin extends over states of Kerala, Karnataka, Tamil Nadu and Union Territory of Puducherry having an area of 56,177 Sq. km, which is 1.73 % of total geographical area of the country with a maximum length and width of 777 km and 135 km respectively. It spreads between 74°25' to 77°36' east longitudes and 8°3' to 14°24' north latitudes. The basin is bounded by Sahyadri hills on the north, by the Western Ghats on the east, by Indian Ocean on the south and by the Arabian Sea on the west. The basin is comprised of three sub-basins; *Netravati and Others sub basin*, *Periyar and others sub basin* and *Varrar and others sub basin*.

The major independent rivers in the basin are the *Varahi*, *Netravati*, *Payaswani*, *Valapattanam*, *Chaliyar*, *Kadalundi*, *Bharathapuzha*, *Periyar*, *Muvattupula*, *Minachil*, *Pamba*, *Achankovil*, *Kallada* and *Vamanapuram*.

The major part of basin is covered with agriculture land accounting to 50.82% of the total area while 34.72% is covered by Forest. The salient features for the basin are described in Table 2.

Brief descriptions of the rivers are given below.

2.13.1 Haladi: This river Haladi originates in the Western Ghats near Someswara in the reserved forest of Karnataka. The river has a drainage area of 781 Sq.Km and a total length of 70 Km. The water quality station on this river is at **Haladi**, where water quality observation commenced from 01.09.1993.

2.13.2 Swarna: This river Swarna is one of the major west flowing rivers in Dakshina Kannada district. Total drainage area of this river up to the site is 327 Sq.Km. and the river flows for a distance of 61.05 Km up to its confluence with sea. The river is called Yennehole in the initial stages and Swarna after its confluence with its tributary Kaud-hole. The water quality station on this river is established at **Yennehole**, where water quality observations are being carried out from 01.09.1993.

2.13.3 Netravathi: The Netravathi rises between Kudermukh and Ballalaryan Durga in the Dakshina Kannada district of Karnataka at an elevation of about 1000 metre at 75° 20' East longitude and 30° 10' North latitude flows generally in north-south direction for 40 km up to Gohattu, where it takes a turn towards the west and flow in east-west direction practically up to its outfall into the Arabian Sea near Mangalore. The climate of the basin is characterized by heavy rainfall, high humidity and oppressive weather in hot season. The hot season from March to May is followed by the South West monsoon from June to September. The Kumaradhara, a major left-bank tributary joins it near the village Uppinangadi. The total length of the Netravathi is 103 km from its source to the outfall. The river drains an area of 3,657 sq km. No major project is in existence in this basin. However, the investigations for the project titled multi-purpose Netravathi Anicut Scheme have been completed. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.13.4 Payaswani: The Payaswani, also known as the Chandragiri in the lower reaches, originates from the Patti Ghat reserve forest in Coorg District of Karnataka. The river covers a distance of 105 Kms. and drains an area of 1538 Sq. kms. The only water quality station on this basin is located at **Erinjipuzha**, where Water Quality observation commenced from 01.07.1988.

2.13.5 Valapatanam: The Valapatanam river rises south of Ammatti village in the district of Coorg in Karnataka State at $75^{\circ} 52'$ east longitude $12^{\circ} 13'$ north latitude at an elevation of 900m above msl. The river has a total length of 101 km from its source to its fall into the Arabian Sea. The river drains an area of 1,867 sq km of which 546 sq km lies in Karnataka and rest in Kerala. The climate of this basin is characterized by heavy rainfall, high humidity and oppressive weather in hot season. The Kattampally multipurpose project is the main irrigation Projects in this basin. The Kattampally project has been planned in two stages. The stage I will not only prevent saline water intrusion and reduction of flood but also provide irrigation benefits to an area of 1,280 ha. The second stage of the project is expected to irrigate an additional area of 1,650 hectares. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.13.6 Chaliyar: The Chaliyar, known in the lower reaches as the Beypore, is one of the major rivers of Kerala. The main river starts from the Elambalari hills at an altitude of 2,067m above msl. It is formed by the confluence of numerous streams and rivers. Its important tributaries are the Cherupuzha, The Iringipuzha, the Vadapurampuzha and the Chaliyarpuzha. The Chaliyar flowing for a total length of about 169 km and finally joins the Arabian Sea at Beypore. The river drains a total area of about 2,933 sq km of which 2545 sq. Km lies in Kerala and 388 sq. Km in Tamilnadu. Good rainfall and humid temperature throughout the year are the characteristic of the basin. The climate along the coastal area of the basin is generally hot with high humidity. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.13.7 Kadalundi: The Kadalundi river originates from Karuvarakkundu village in the Calicut District of Kerala State. It drains a total area of 1,112 Sq.kms. and traverses about 130 Kms. Water Quality station on this basin is located at **Karathodu** only, where Water Quality observation commenced from 01.12.1988.

2.13.8 Bharathapuzha: The Bharathapuzha River is the second longest west flowing river that drains into the Arabian Sea in Kerala State. This basin is bounded in the east by the Cauvery basin and in the west by the Arabian Sea. The basin lies approximately between $10^{\circ} 26'$ and $11^{\circ} 13'$ north latitudes and $75^{\circ} 53'$ to $77^{\circ} 13'$ east longitudes. Its drainage area is spread in Tamilnadu and Kerala states. The basin is elongated in shape and finds its outlet into the Arabian Sea. The total drainage area of the basin is 6,186 sq km out of which nearly 71 percent lies in the Kerala State. The Bharathapuzha basin receives copious rainfall during the south west monsoon and it falls in the rain shed region of the Western Ghats. There are five H.O. sites for each of Gauge, Discharge, Sedimentation and Water Quality.

2.13.9 Chalakudi: The Chalakudi River has its origin in the Annamalai hills of Western Ghats. It is formed by the confluence of five streams namely the Parambikulam, the Kuriarkutty, the Sholayar, the Karappara and the Anakayam. The river has a length of 130 km. The total drainage area of the river is 1,704 sq km of which 1404 sq. Km lies in kerala and the rest in Tamil Nadu. Good rainfall and humid atmosphere are felt throughout the year. The climate along the coastal area of this basin is generally hot with high humidity. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.13.10 Periyar: The Periyar River is 244 km in length and the longest river of Kerala and drains an area of 5,398 sq km. It rises at the forest land Sivagiri peak 80 km south of Devikulam at an elevation of 2,438m above msl and traverses the steep mountainous terrain before it is joined by the Mullaiyar, 16 km downstream. The river then turns west and continues to flow in the direction for about 16 km in a sandy bed. After a winding course of

about 13 km, the river reaches Vandiperiyar and passes through a second narrow gorge below which the Perumthura joins it. Further down, it is joined by six tributaries of which the important tributary Edmala joins the Periyar. Passing Malayattur and thereafter taking a meandering course, the river reaches Alwaye where it divides itself into two branches. The upper branch joins the Chalakudi River at Punthenvelikara and then expands into a broad sheet of water at Munambham. The other branch taking a southerly course is broken up into a number of small channels, which fall into the Vembanad Lake as Varapuzha. There are 2 Gauge, 2 Discharge, 2 water quality and one sedimentation type of H.O. sites.

2.13.11 Muvattupuzha: River Muvattupuzha originates in the Kottayam district of Kerala. It is a perennial river with total drainage area 1554 Sq.kms and the length is 121 kms. There are two water quality stations on this Basin, one on the main river Muvattupuzha at **Ramamangalam** and the other at **Kalampur** on its tributary called Kaliyar.

2.13.12 Meenachil: River Meenachil originates in Kottayam district of Kerala State. The total length of the river from its origin to Vembanad Lake, where it joins is about 78 kms. The drainage area is 1272 Sq.Kms. The only water quality station on this river is at **Kidangoor**, where water quality observation commenced from 02.06.1986.

2.13.13 Pamba: The Pamba, 176 km in length, is the third longest river in Kerala. It is formed by the confluence of the Pamba Aar, Kaki Aar, Arudhai Aar, Kakkad Aar and Kall Aar. The Pamba Aar rises in the Peermedu Plateau at an elevation of 1,670m. The Kaki Aar, which forms the major tributary of the Pamba River, is a much larger stream at the beginning than the main river. The Pamba River, after receiving the Kaki Aar, flows in a Westerly direction till the Arudhai Aar joins it. At Narayanamuzhi, it turns and follows a south-eastern direction until the Kakkad Aar joins it. Beyond the confluence, the river flows in a southerly direction up to Vadasserikkara where it is joined by the Kall Aar, which has its origin in the Valanjakkatti Malai. The catchment area of the river is 2,235 sq km. At Pandanad, the river bifurcates and one branch taking a western course. The Manimala joins the Pamba in its Neeretupuram branch. The river thereafter flows northwards and falls into the Vembanad Lake through several branches. The basin experiences good rainfall, moderate temperature and humid atmosphere. The south west and north east monsoon have great influence over the climatic condition of the basin. There is one H.O. site for each of Gauge, Discharge, Sedimentation and Water Quality.

2.13.14 Achankovil: River Achenkovil originates in the south of Devarmalai, in the Quilon District of Kerala. The river is formed by several streams originating from Pasukidamettu, Ramakkla Teri and Rishi Malai. It has a total length of 128 km. and drains an area of 1484 Sq. Km. The drainage area up to the Site is 810 Sq. Km. The only water quality station on this basin is located at **Thumpamon**, where Water Quality observation commenced from 15.10.1978.

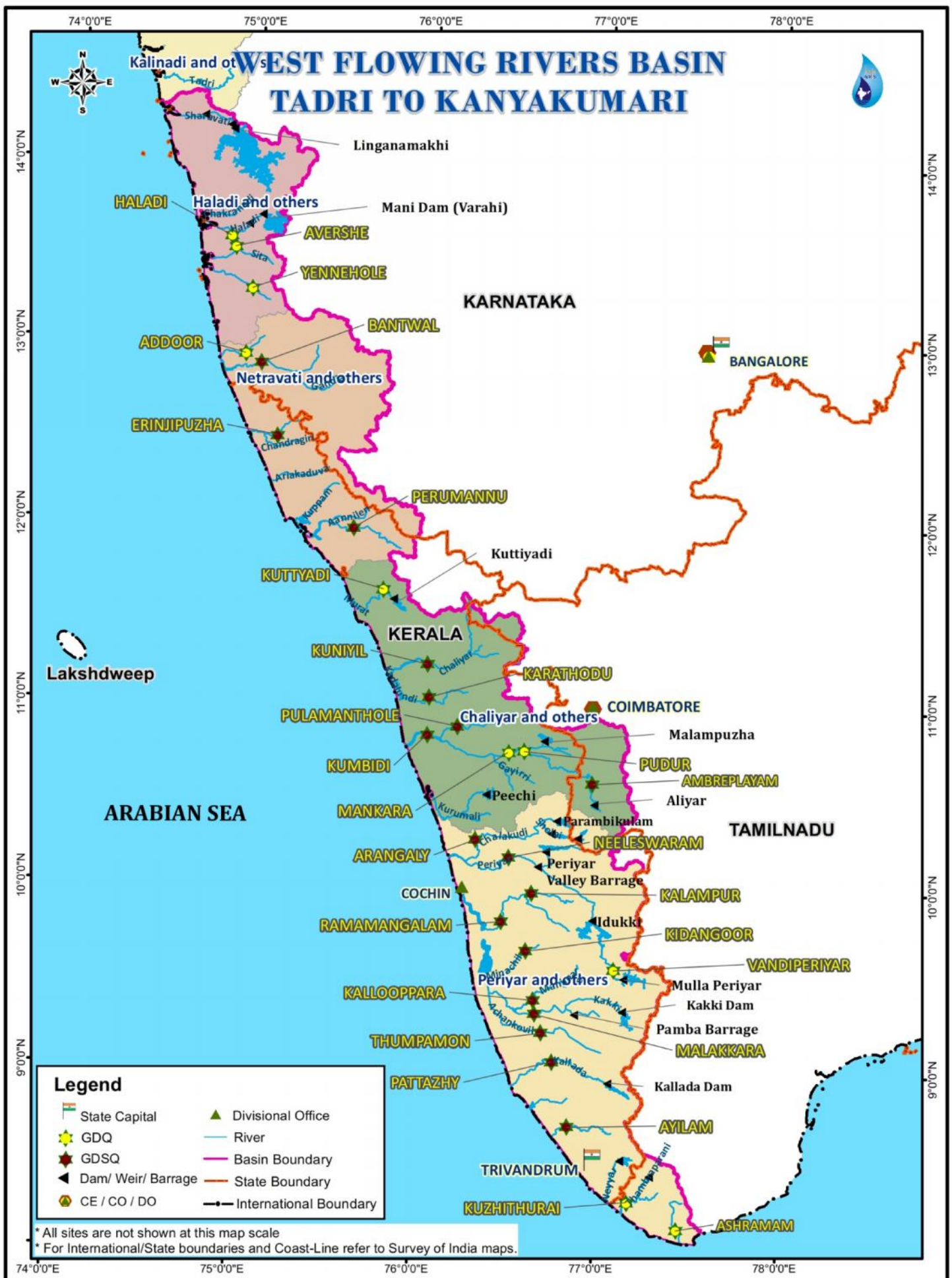
2.13.15 Kallada: The Kallada River is formed by the three rivers i.e. Kulathupuzha, Chendurni and Kalthuruthy joining together near Parappar. The river has its origin in Papanasam range south of Kulathupuzha in Quilon district of Kerala State at an altitude of 900m above msl. The river has a length of 121 km and drains an area of 1,699 sq km before confluence with the Ashtamudilake. The basin experiences good rainfall and humid atmosphere throughout the year. The climate along the coastal region of this basin is generally hot with high humidity.

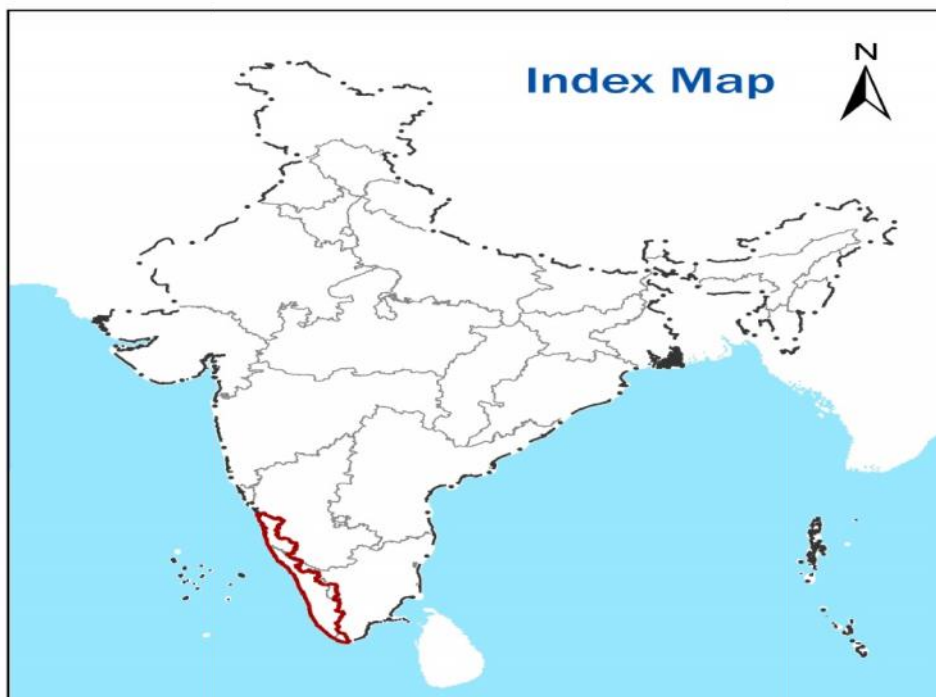
2.13.16 Vamanapuram: River Vamanapuram originates from Chemunji Motai in Kerala. Its total drainage area is 687 Sq.Kms and the length is 88 Kms. The only water quality station on this river is at **Ayilam**.

2.13.17 Irrigation Projects: The Anjunem in the sub-basin of Mandovi, Kal in the sub-basin of Kal, Swarna Dam in the sub-basin of Swarna, Kattampally in the sub-basin of Valapatanam, Malampuzha Reservoir, Tirumurthi and Aliayar in the sub-basin of Bharathapuzha, Chalakudi River Diversion Scheme, Sholayar H.E.S and Peringilkuthu Left Bank Scheme in the sub-basin of Chalakudi, Periyarvalley Project, Edamalayar and Idukky Hydel Project in the sub-basin of Periyar, Pamba Hydel Project in the sub-basin of Pamba, Kalada Irrigation Project in the sub-basin of Kalada are the major projects in the catchment areas of the west flowing river basin.

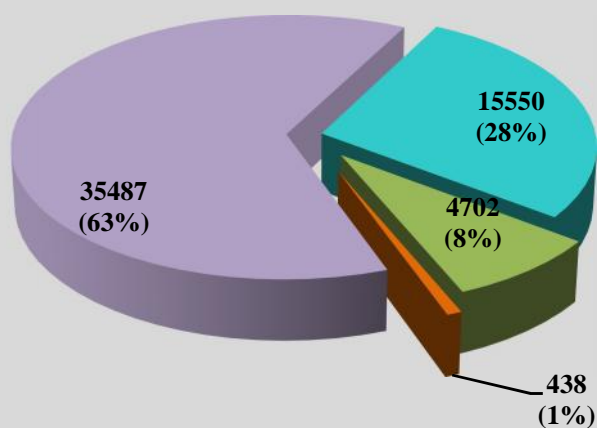
2.13.18 Hydrological Observation Sites: There are 28 sites in the basin for recording observations on water quality, gauge and discharge and sedimentation. Sediment observations are made at 18 of these stations (as per 2014-15 data).

2.13.19 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for two sites of the basin (Fig 2.13.1 to Fig 2.13.11).



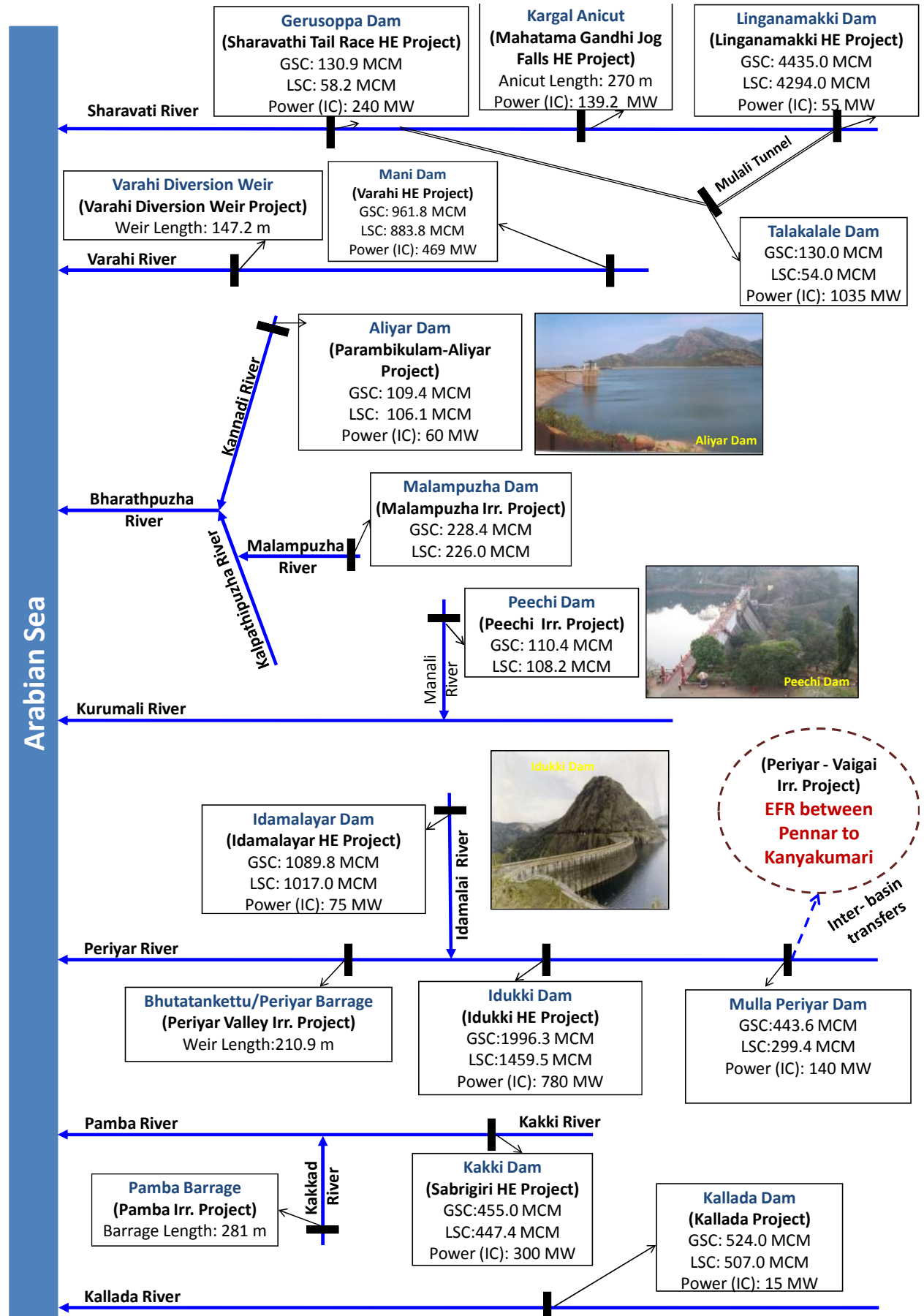


State Wise WFR from Tadri to Kanyakumari Basin Area (Sq. km)

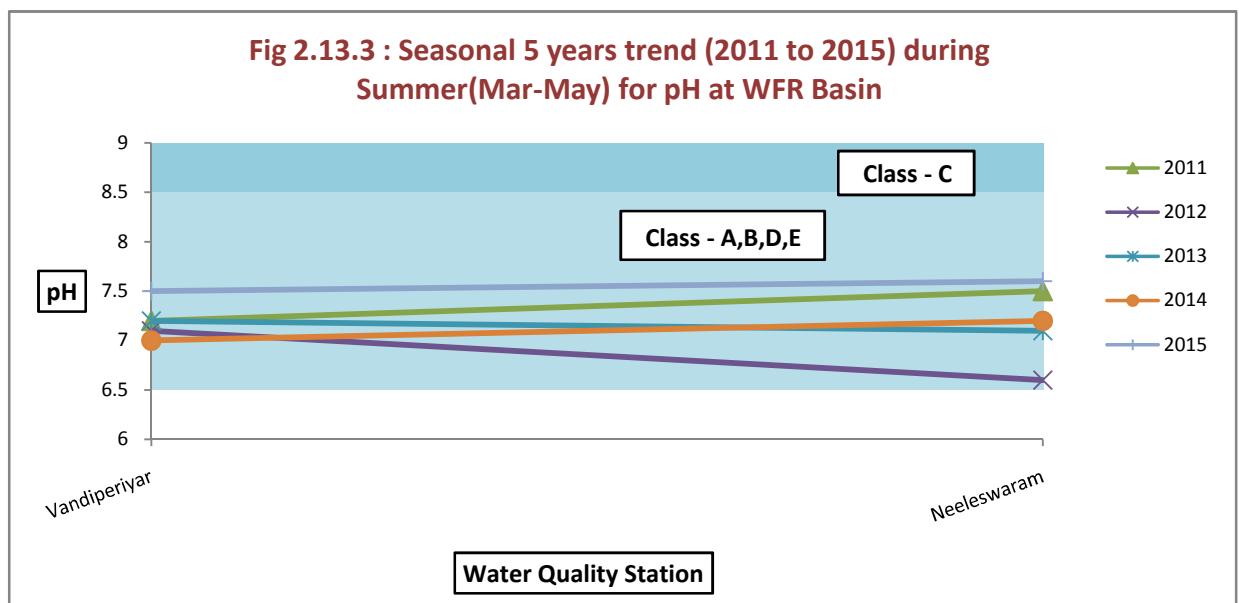
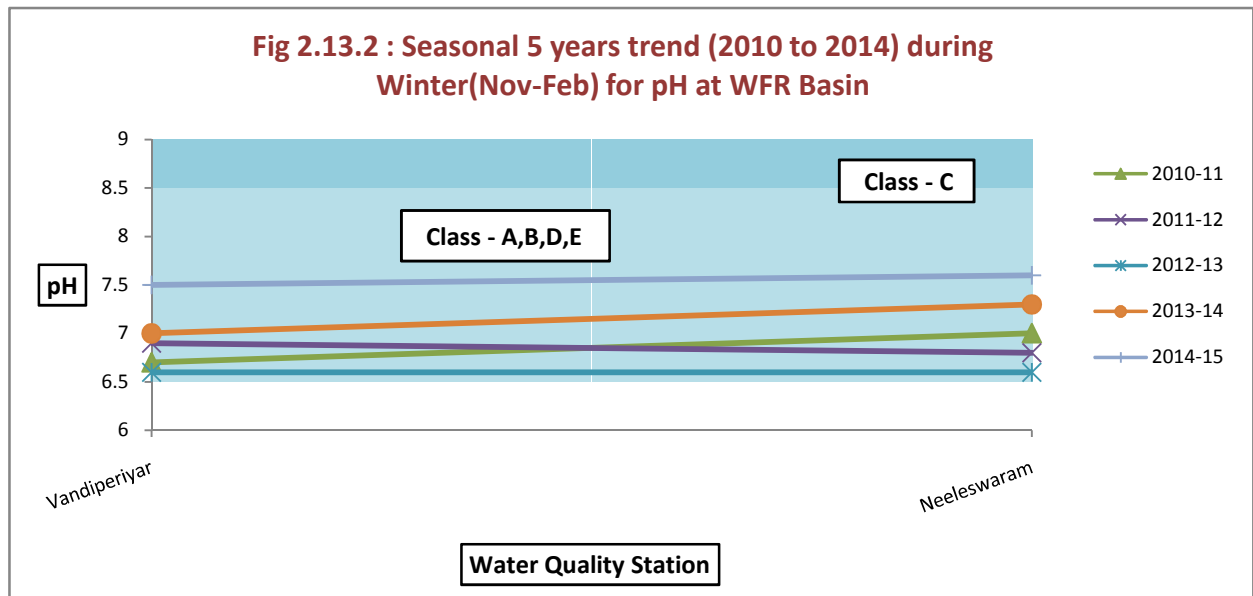
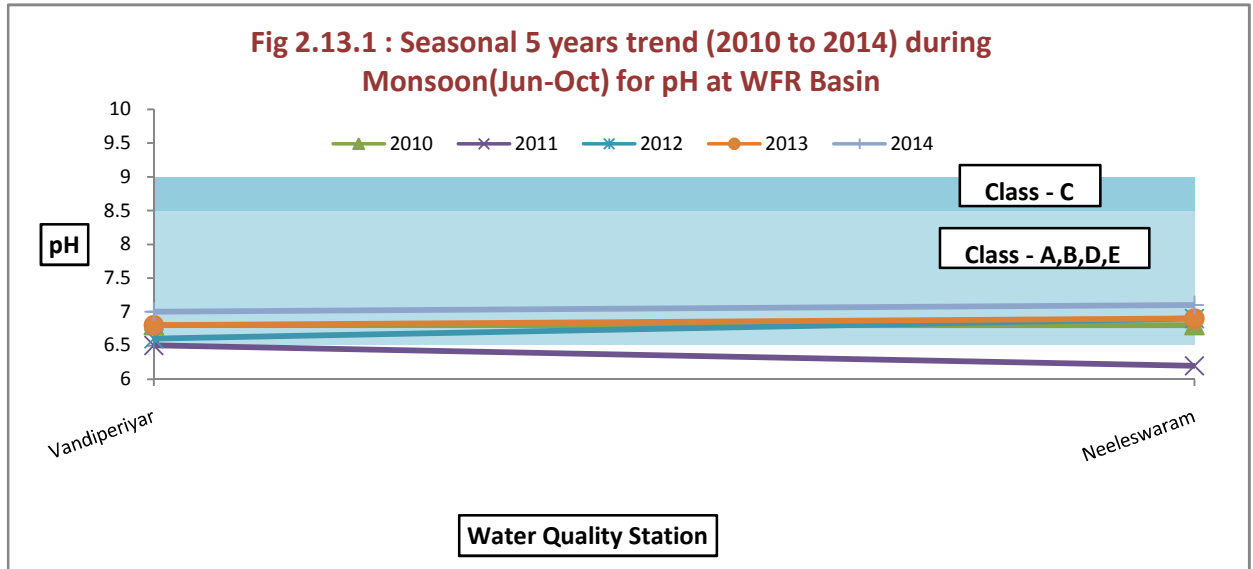


■ KERALA ■ KARNATAKA ■ TAMIL NADU ■ PUDUCHERRY

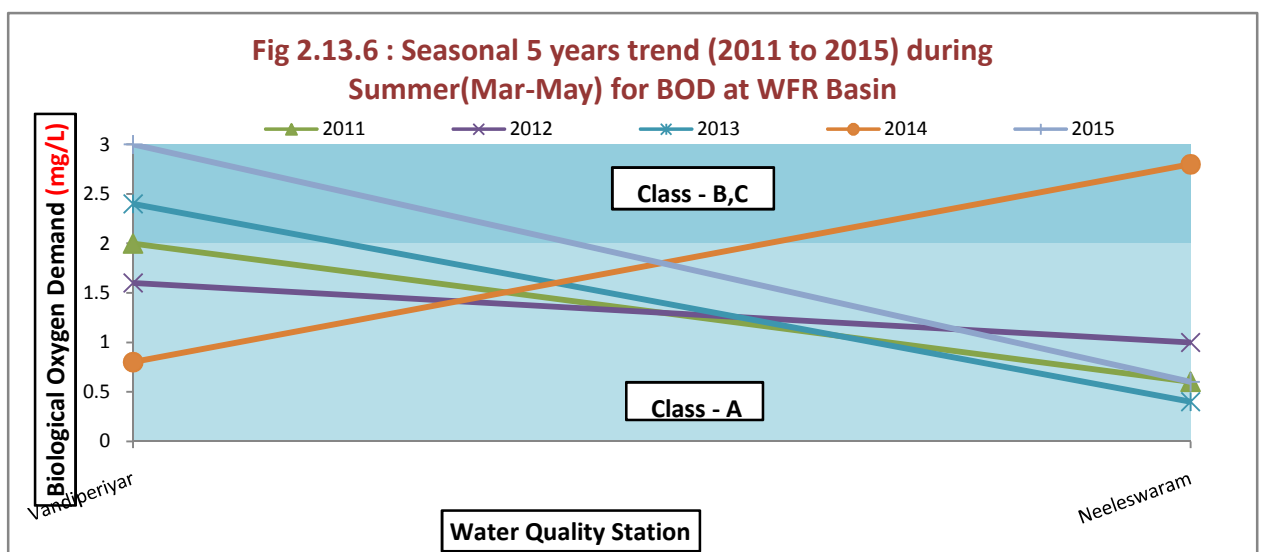
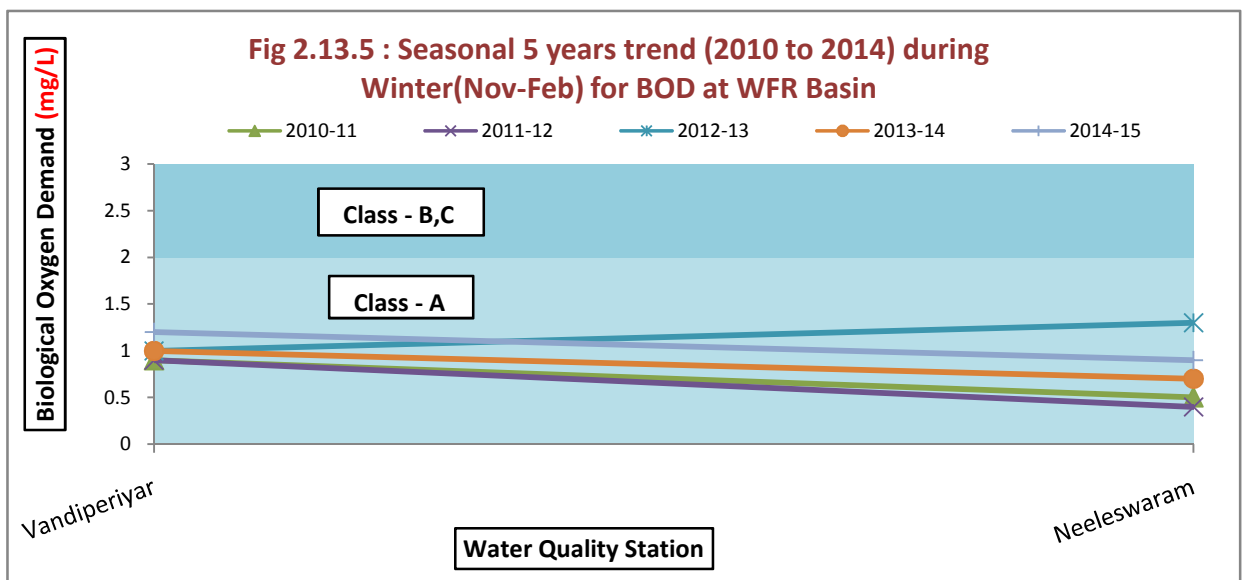
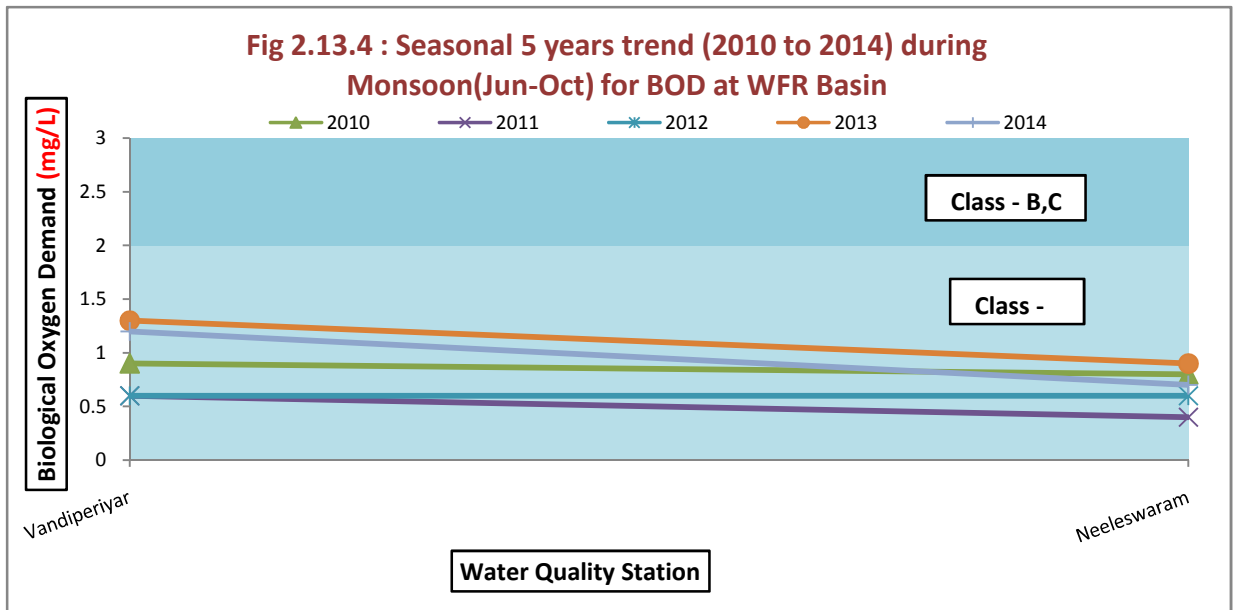
WFR from Tadri to Kanyakumari Flow Line Diagram



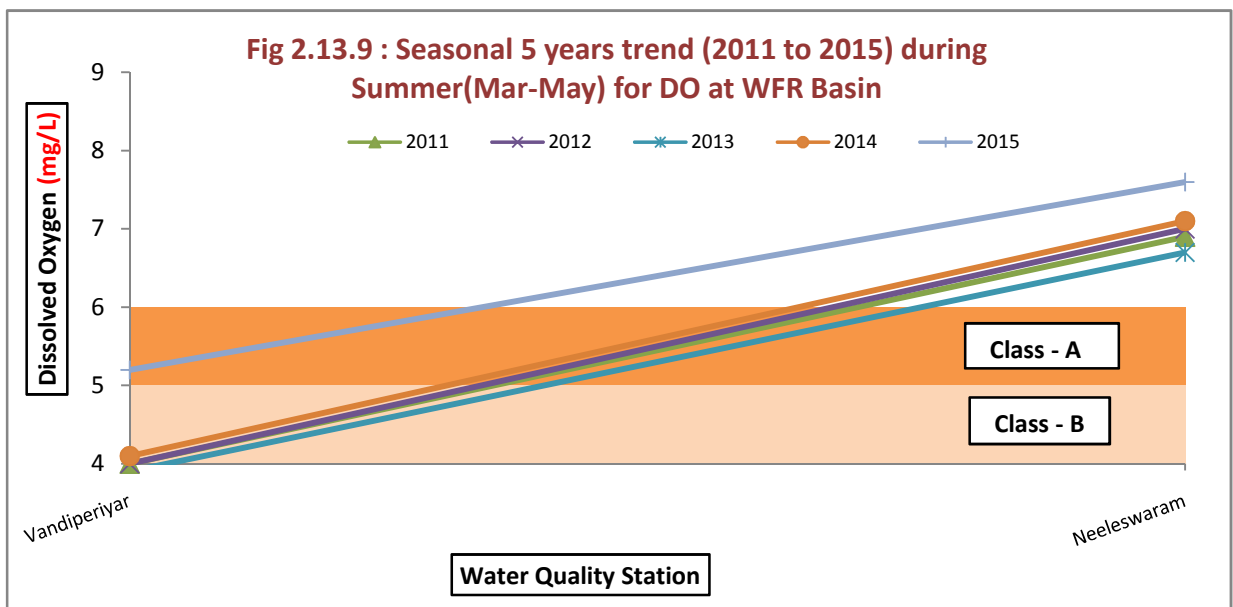
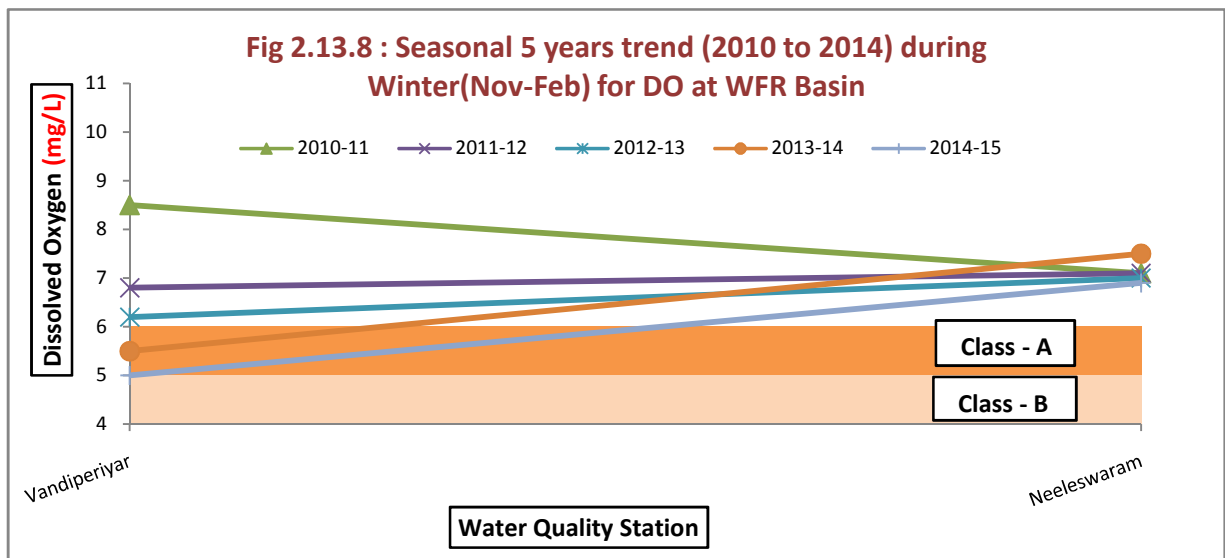
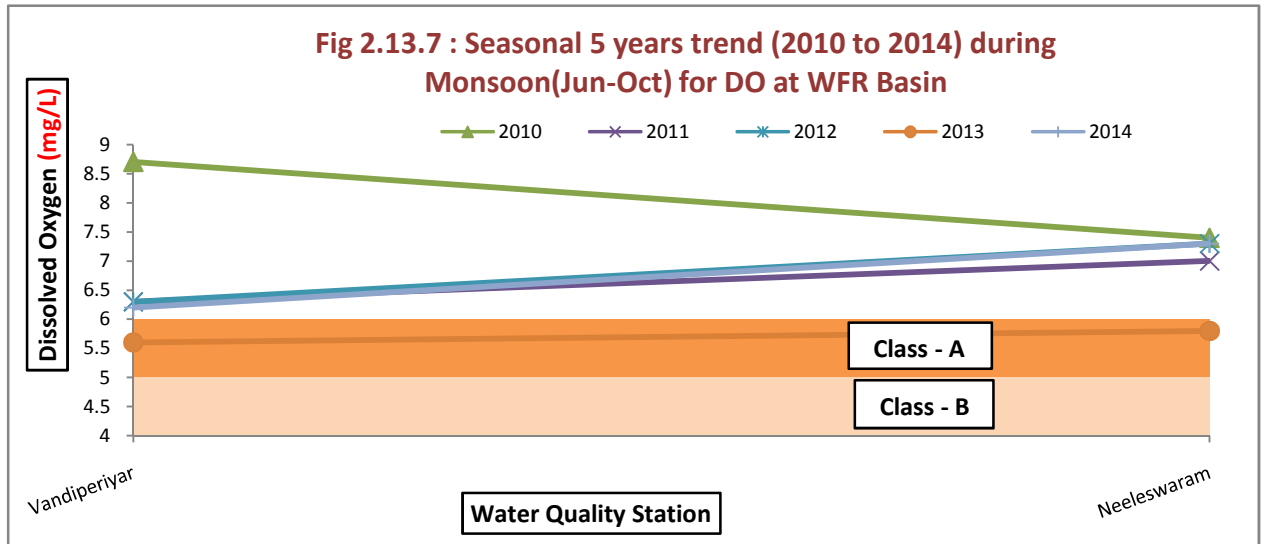
Basin: WFR Tadri to Kanyakumari (Quality Parameter : pH)



Basin: WFR Tadri to Kanyakumari (Quality Parameter : BOD)



Basin: WFR Tadri to Kanyakumari (Quality Parameter : DO)



Basin: WFR Tadri to Kanyakumari (Quality Parameter : Total Hardness)

Fig 2.13.10 : Seasonal 5 years trend (2010 to 2014) during Monsoon(Jun-Oct) for Total Hardness at WFR Basin

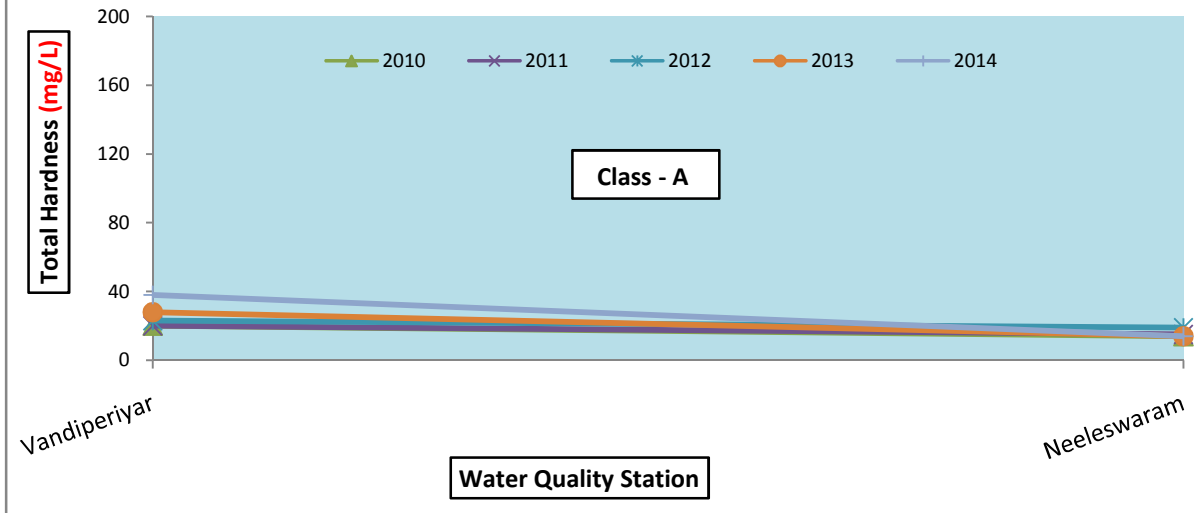


Fig 2.13.11 : Seasonal 5 years trend (2010 to 2014) during Winter(Nov-Feb) for Total Hardness at WFR Basin

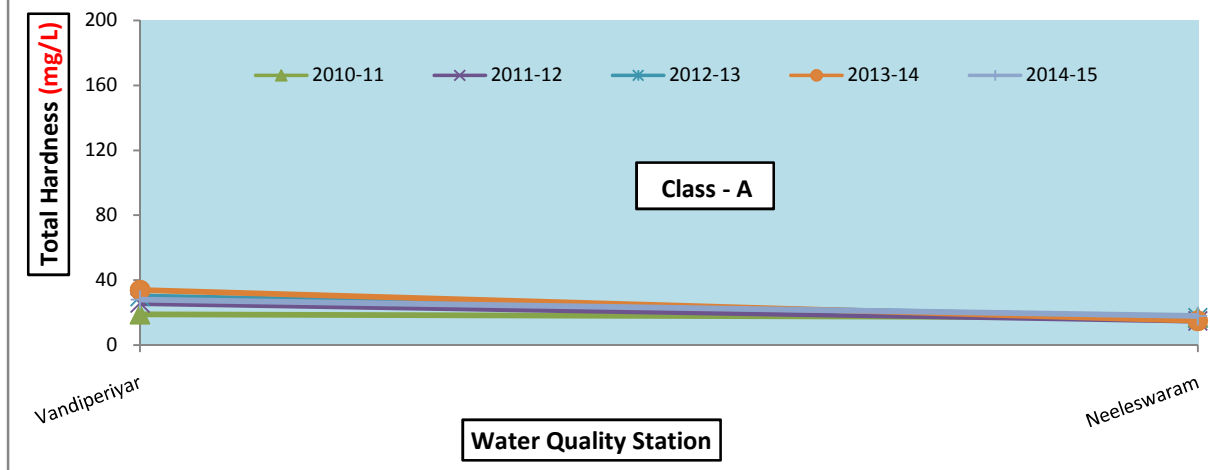
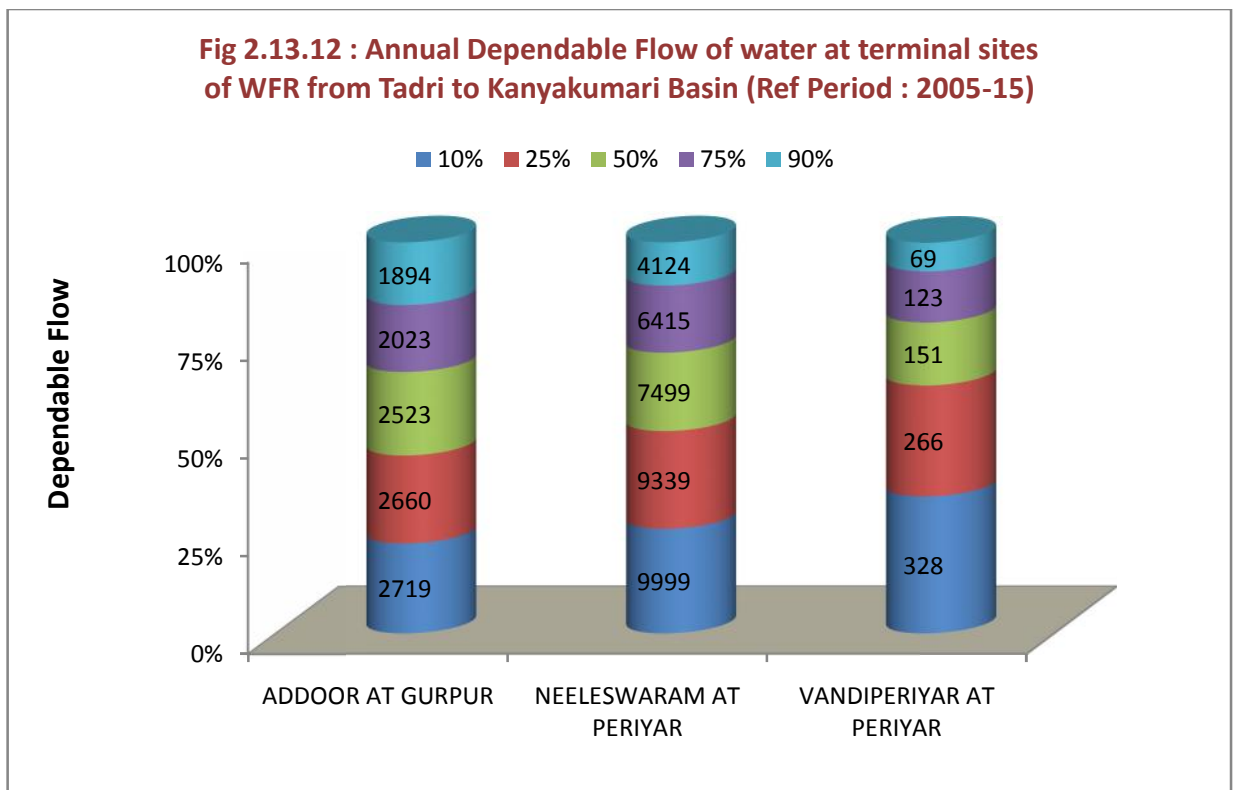


Table 2.13.1: Annual Dependable Flow of Water at Terminal Sites of WFR from tadri to Kanyakumari Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
(1)	(2)	(3)	10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	ADDOOR AT GURPUR	6/2005 to 5/2015	2719.40	2659.64	2523.42	2023.01	1893.56	NA
2	NEELESWARAM AT PERIYAR		9999.30	9338.94	7499.14	6414.73	4123.72	NA
3	VANDIPERIYAR AT PERIYAR		327.89	265.63	150.53	122.58	68.54	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore



2.13.20 Land Use Statistics: Table 2.13.2 to Table 2.13.4 present below the land use pattern, gross irrigated area and net irrigated area for WFR tadri to Kanyakumari basin as compared to all basins (Region-III).

TABLE 2.13.2: LAND UTILISATION PATTERN OF WFR TADRI TO KANYAKUMARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
WFR tadri to kanyakumari	54232.42	15462.37	8322.94	3556.43	2182.51	24708.16	5856.47	30564.63
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.13.3: GROSS AREA IRRIGATED BY SOURCES PATTERN OF WFR TADRI TO KANYAKUMARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
WFR tadri to kanyakumari	427.77	0.13	427.90	354.69	566.71	1076.63	1643.34	349.70
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.13.4: NET AREA IRRIGATED BY SOURCES PATTERN OF WFR TADRI TO KANYAKUMARI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
WFR tadri to kanyakumari	1164.80	12.18	1176.98	757.10	787.14	2362.03	3149.17	1330.04
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.14 MAHI BASIN

Location: The Mahi river is one of the major west flowing inter-state river of India, draining into the Gulf of Khambat. The basin is bounded on the North and the North - West by Aravalli hills, on the East by the ridge separating it from the Chambal Basin, on the South by the Vindhya and on the West by the gulf of Khambat. The river Mahi originates on the Northern slope of Vindhya range near the village of Sardarpur in the Dhar District of Madhya Pradesh at an elevation of 500m above msl. Its length is 583 kms and it traverses through states of Madhya Pradesh, Rajasthan and Gujarat. The river Mahi drains an area of 34,842 sq km.

Initially the river flows Northwards through Dhar and Jhabua districts of M.P. and then turns left and passes through the Ratlam district of M.P., then turning to North - West, it enters the Banswara district of Rajasthan and flows in South-West directions and thereafter enters the Panchmahal district of Gujarat state. Then the river continues to flow in the same direction through Kheda district of Gujarat and finally falls into Gulf of Khambat in Arabian Sea. The Mahi Bajaj Sagar, Kadana Reservoir, Wanakbori Weir, Panam, Bhadar, Jakham and Somkamlamba are the major projects in the catchment areas of the Mahi sub-basin.

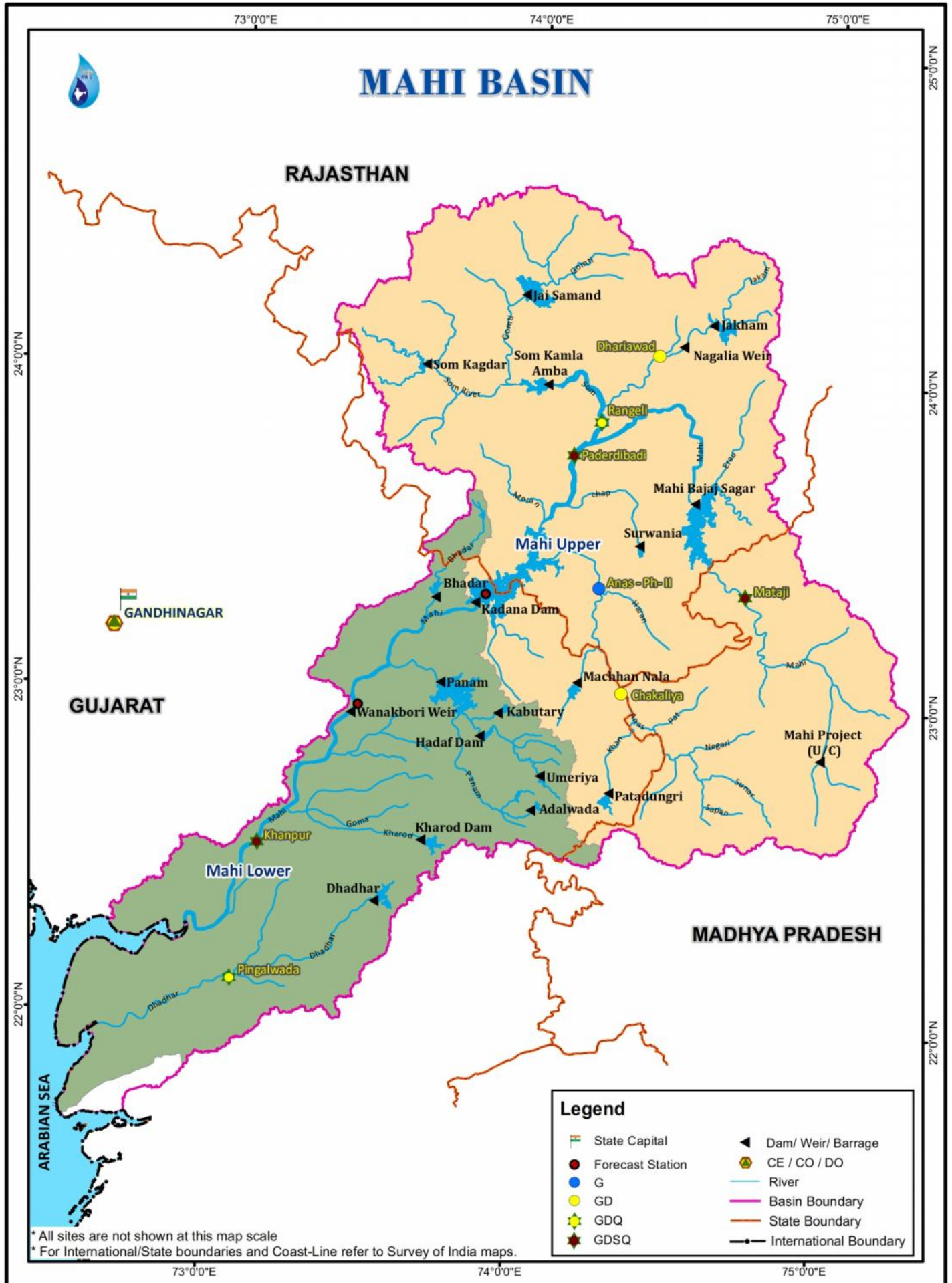
The basin contains two climatic regions, the northern part of the basin comprises sub tropical wet climate (generally basin area occupied by Rajasthan). The major part of the basin comprises tropical wet climate, caused mainly due to existence of Vindhya and the Western Ghats. The temperature of the basin varies from 3⁰ to 47⁰C. The average rainfall in the Mahi basin is 785 mm.

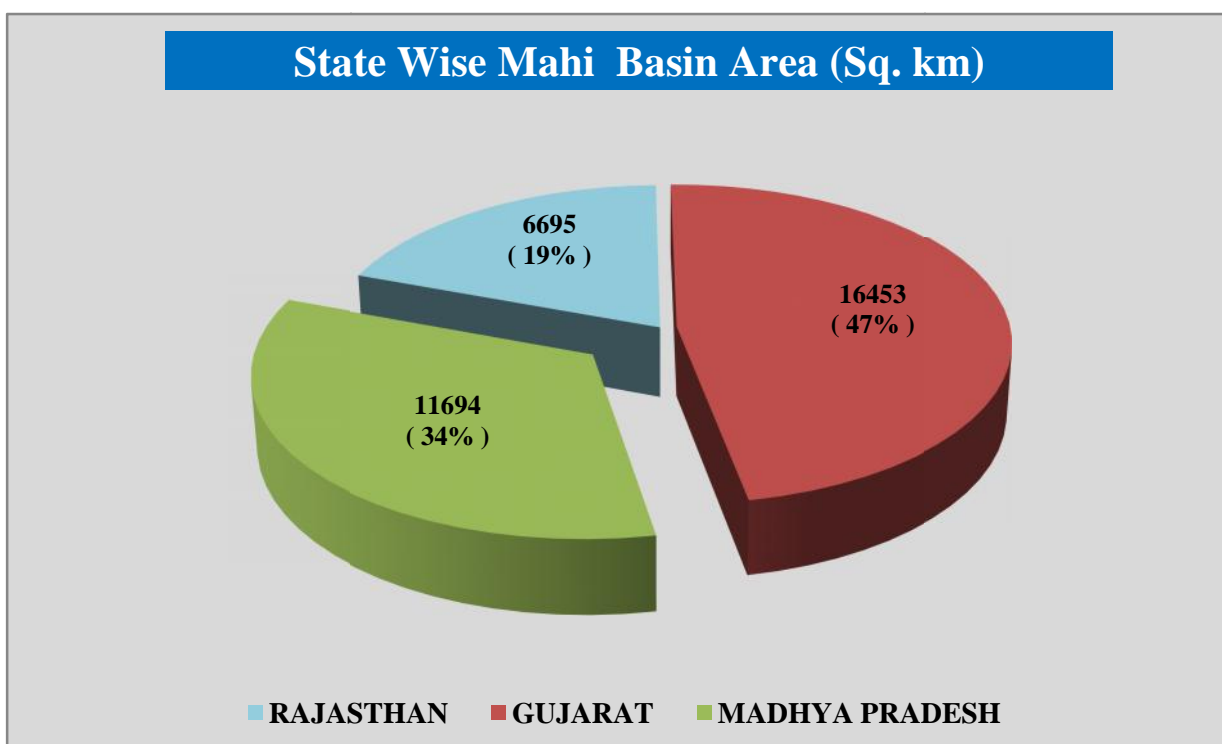
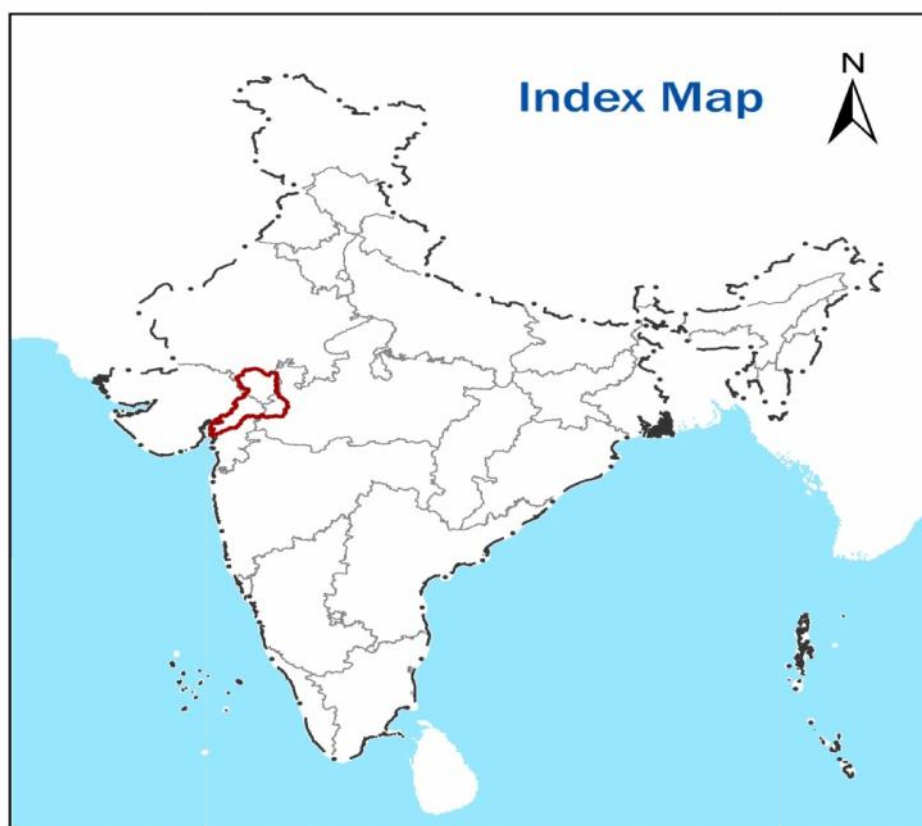
2.14.1 Irrigation Projects: Mahi Irrigation Project, Mahi Bajaj Sagar, Panam Dam, Jakham Dam are major irrigation projects in the basin.

2.14.2 Hydrological Observation (H.O.) Sites: There are total 13 H.O. sites in the basin, out of which 6 sites for Gauge only, 2 sites for Gauge & Discharge, 2 sites for Gauge, Discharge, Water Quality and 3 sites for Gauge, Discharge, Sedimentation & Water Quality.

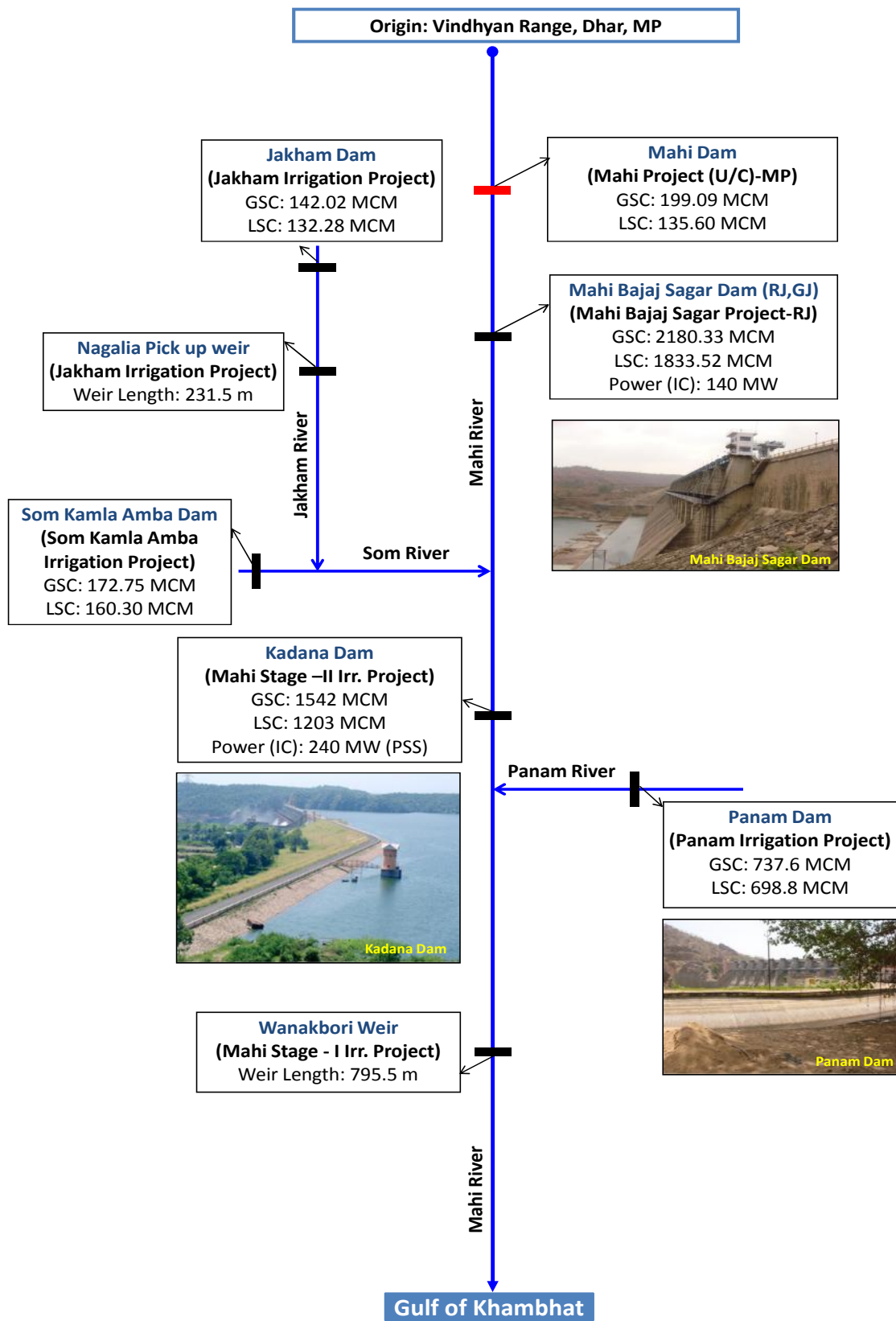
2.14.3 Peak Water Level: Khanpur, Mataji and Paderdibadi are the oldest sites out of the 6 sites reported in the basin, which were established in late 1970 to make the observations of Gauge/Discharge, Sediment and Water Quality. Mataji recorded the highest peak water level at 307 metre dated 04.10.1988 during the reference period 2014-15.

2.14.4 Water Quality: Temporal trends of water quality parameters viz. pH, BOD, DO, Total hardness are given below for three sites of Mahi basin (Fig 2.14.1 to Fig 2.14.12).

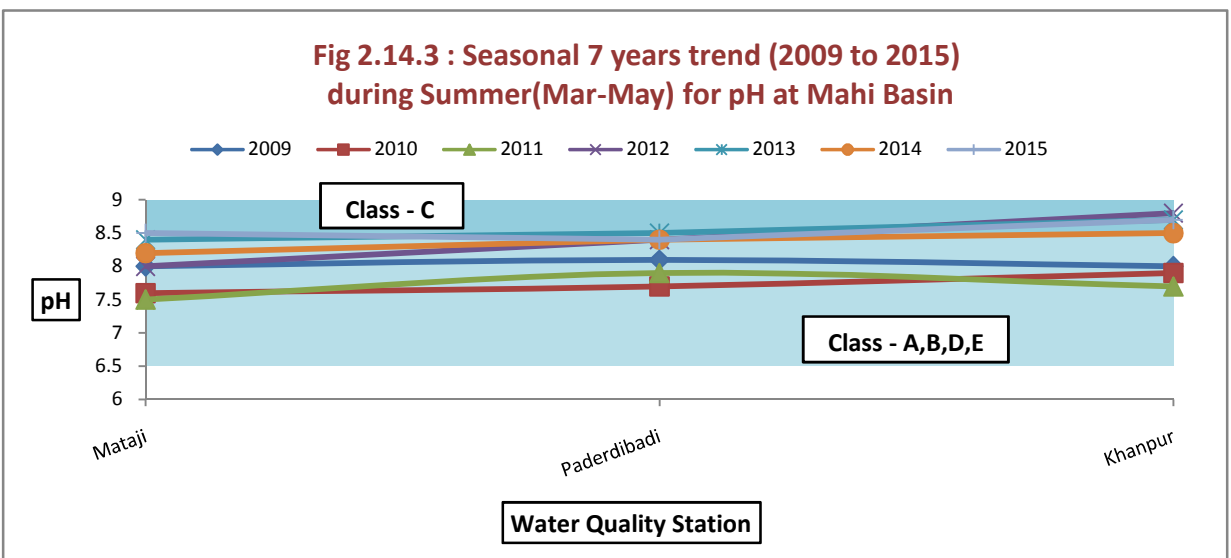
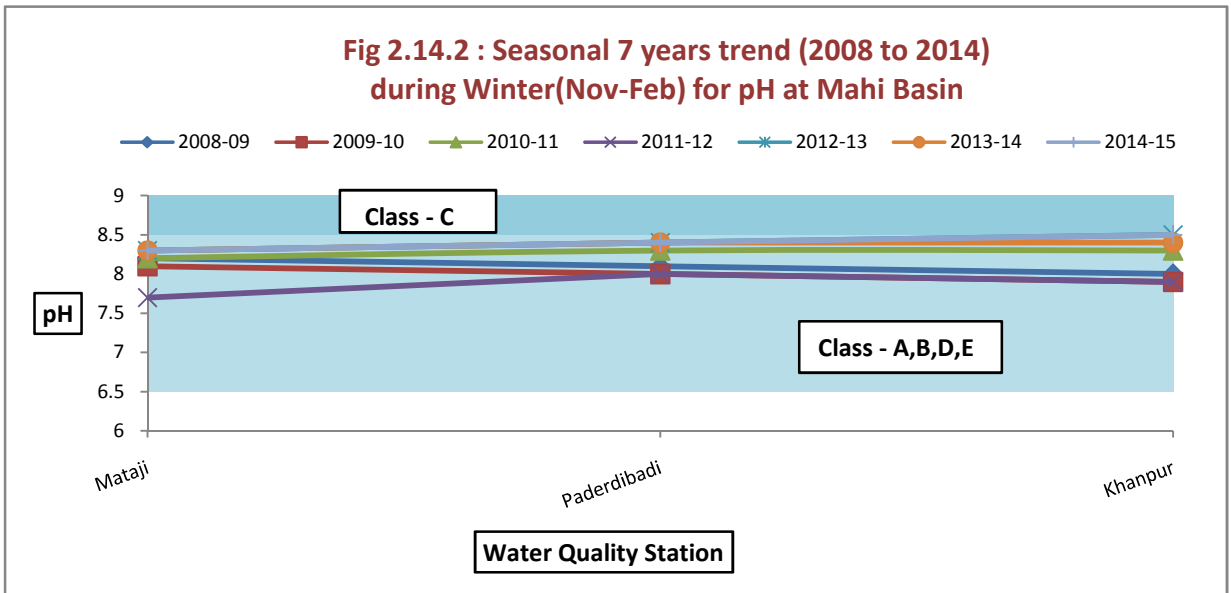
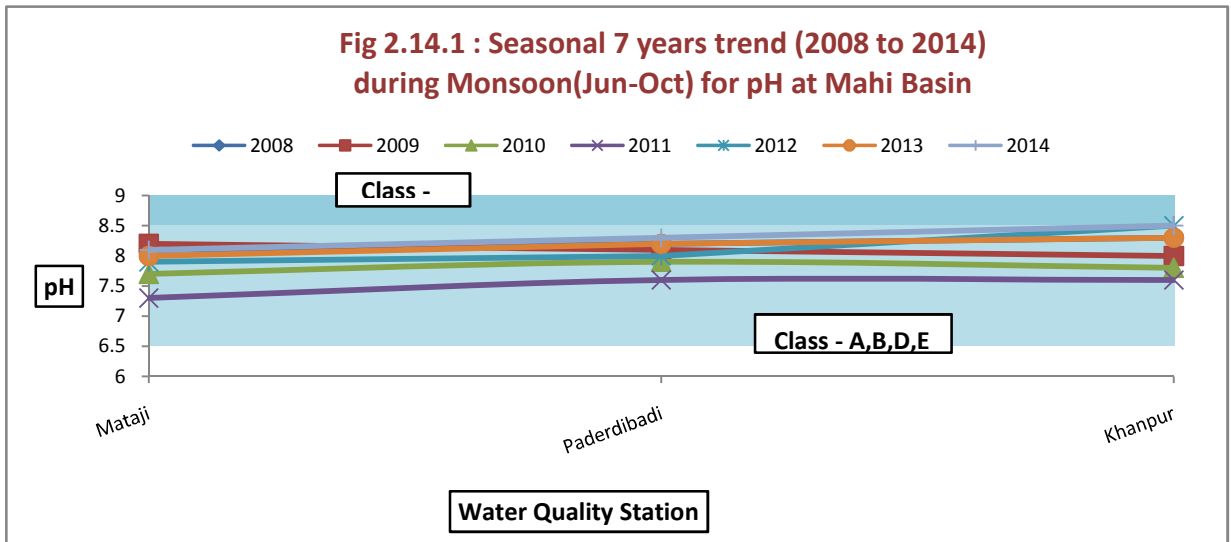




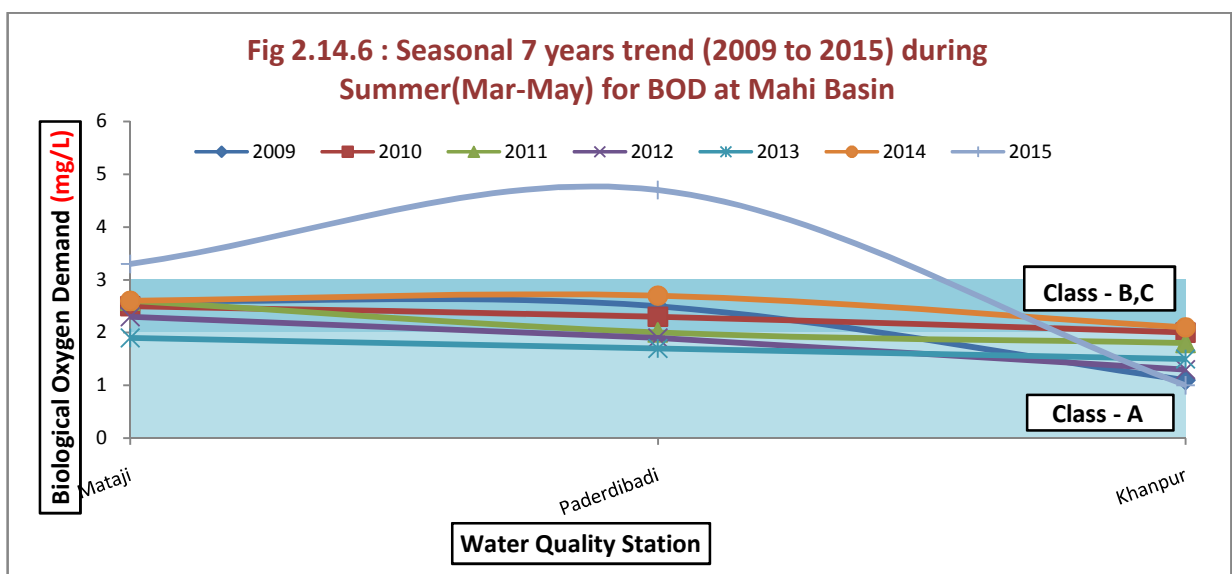
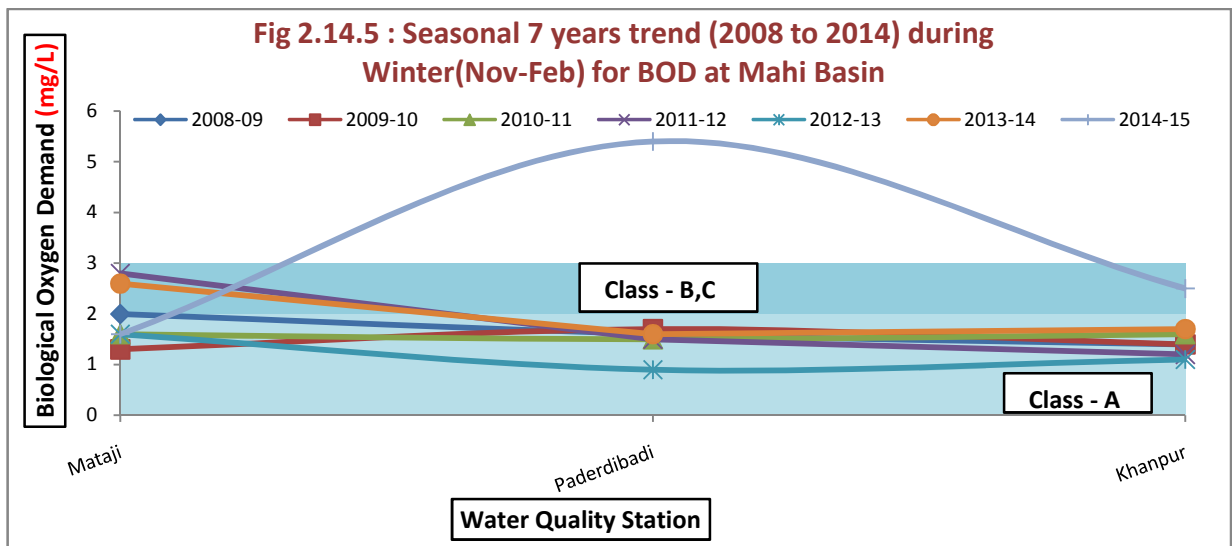
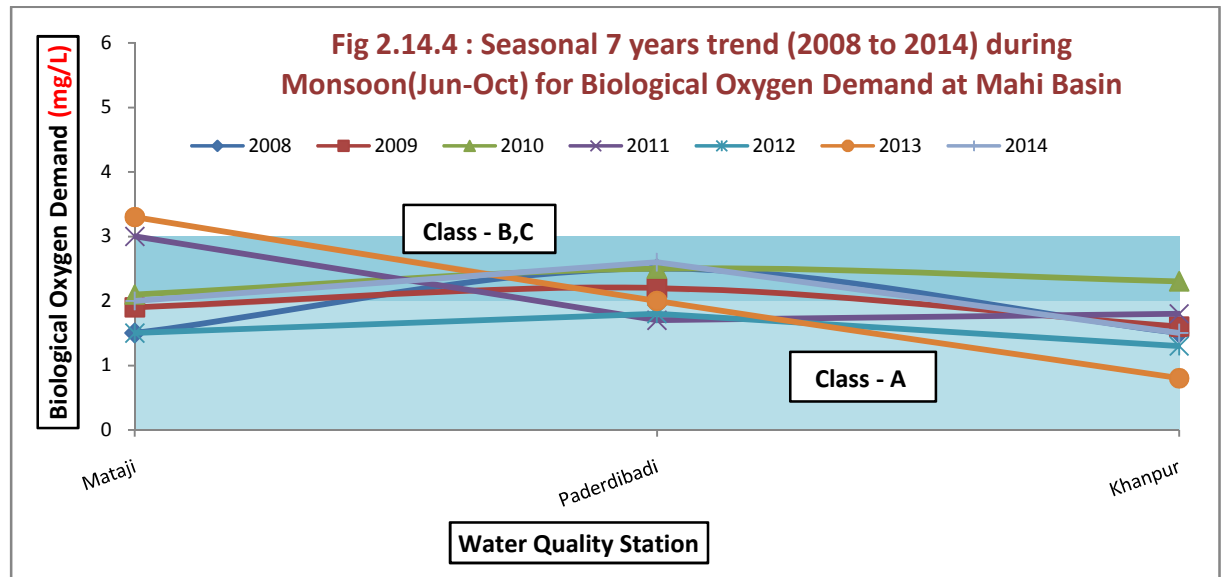
Mahi River Flow Line Diagram



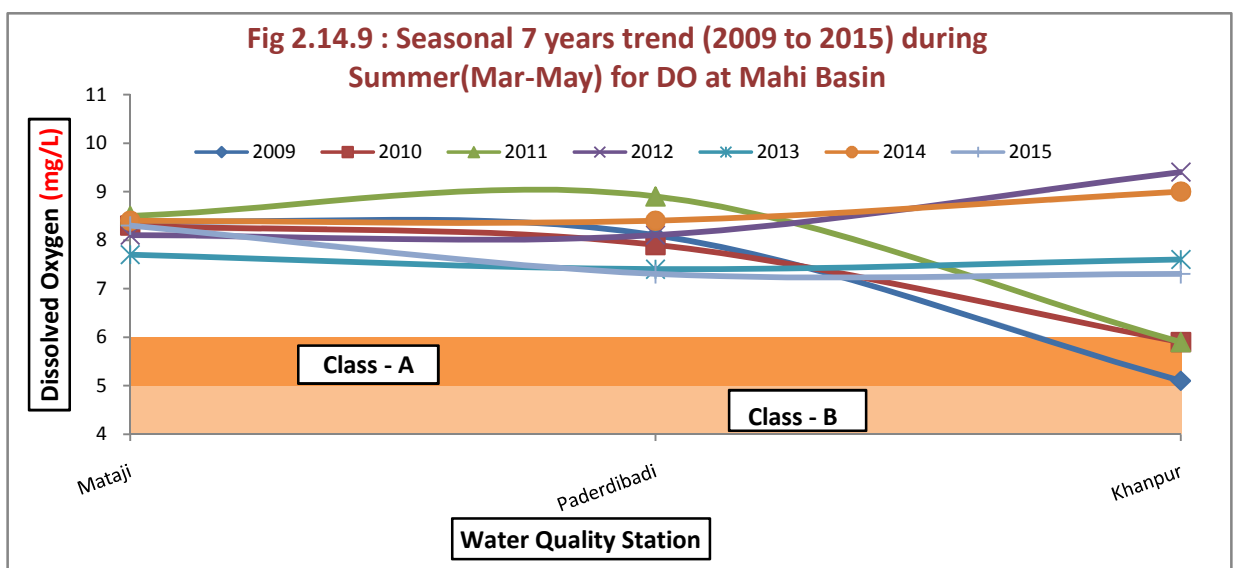
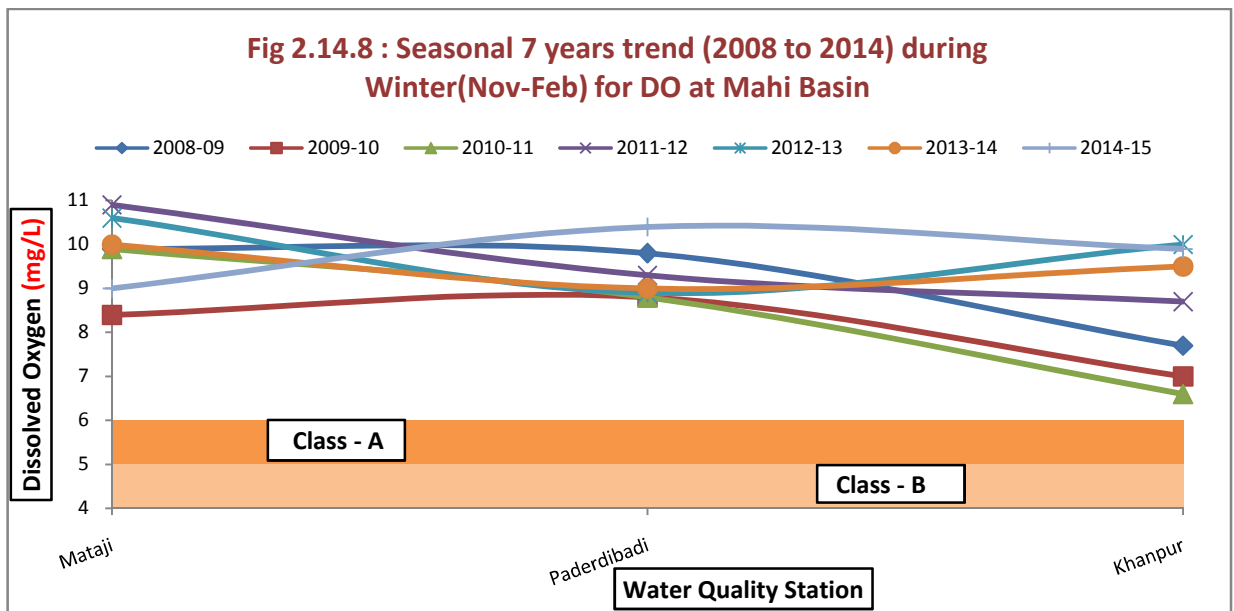
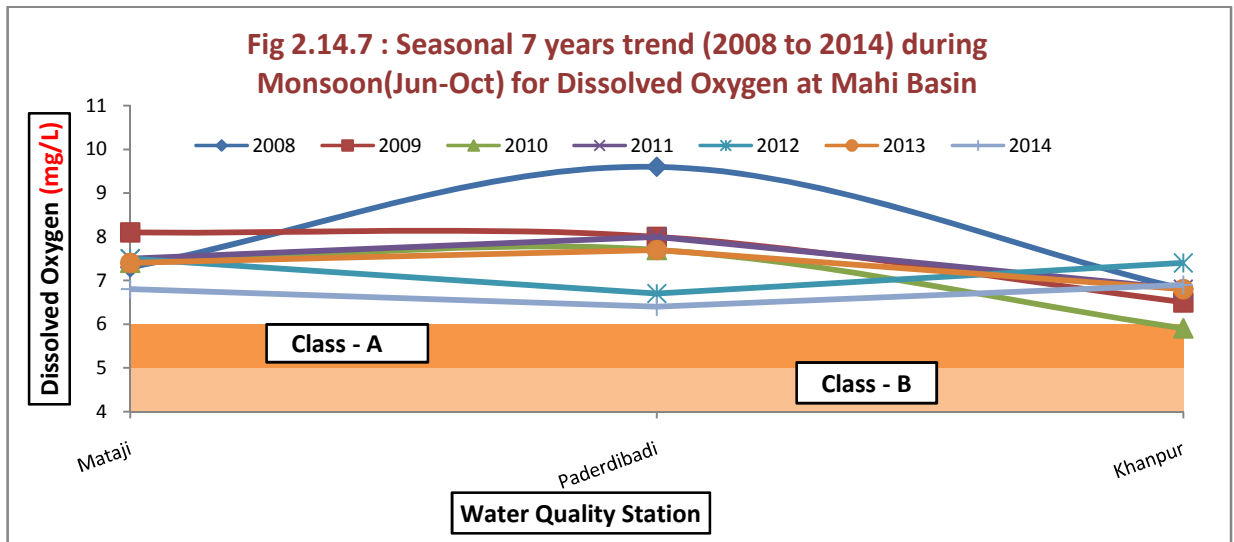
Basin: Mahi (Water Quality Parameter : pH)



Basin: Mahi (Water Quality Parameter : BOD)



Basin: Mahi (Water Quality Parameter : Dissolved Oxygen)



Basin: Mahi (Water Quality Parameter : Total Hardness)

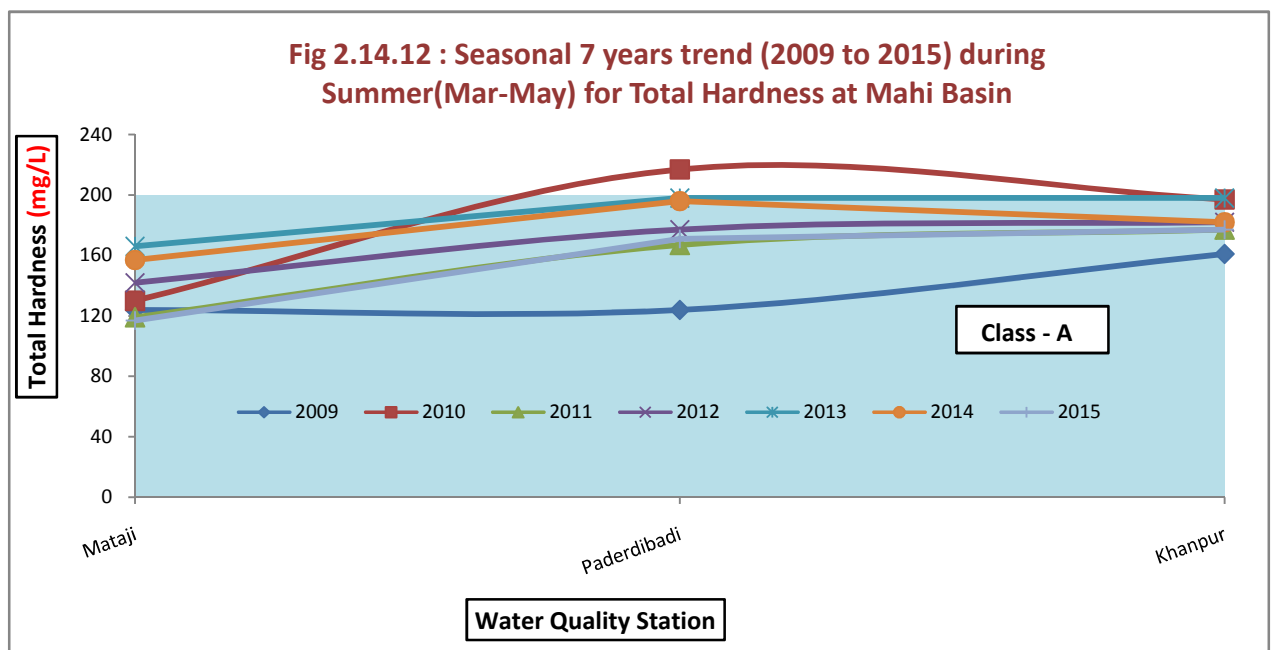
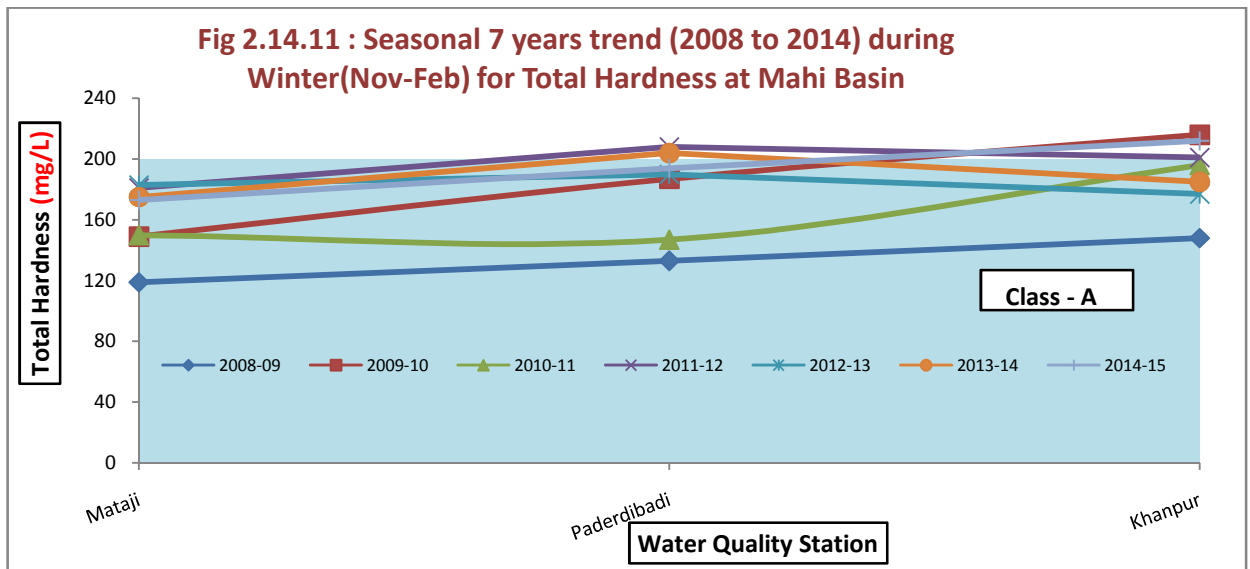
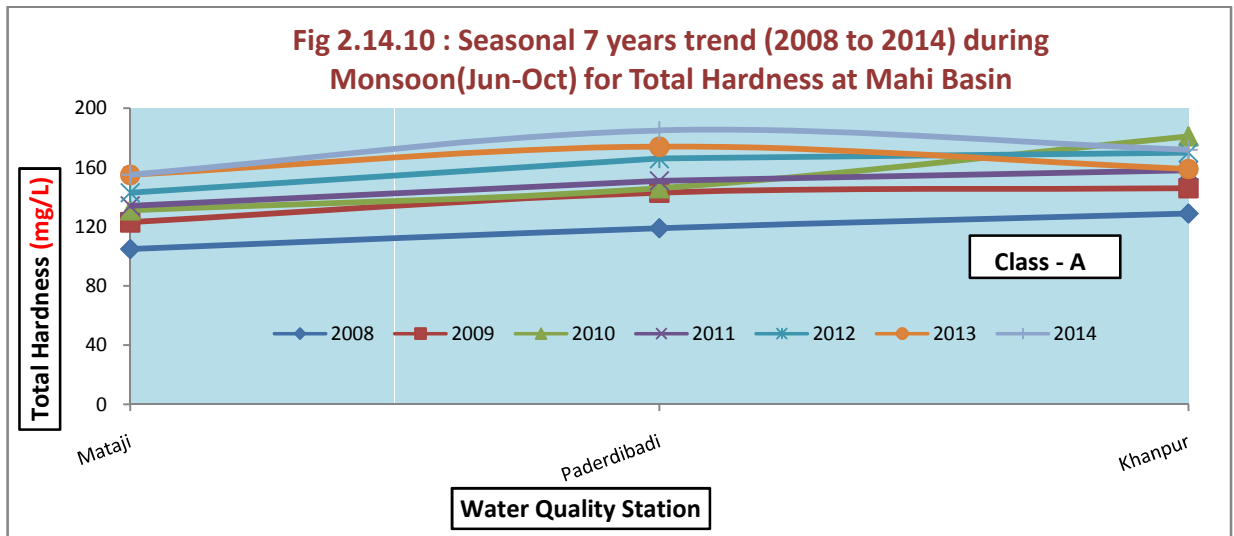
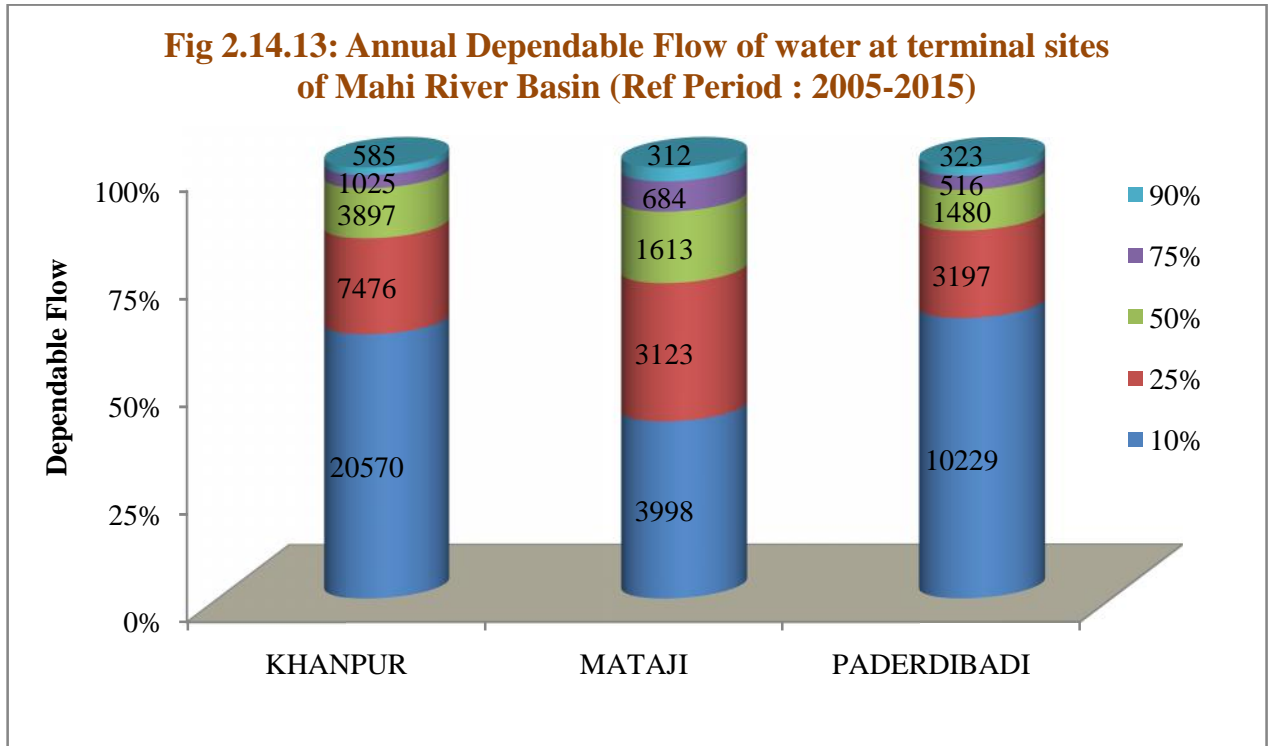


Table 2.14.1: Annual Dependable Flow Of Water at Terminal Sites Of Mahi Basin

Sl. No.	Site Name	Period	Dependable Flow (Unit: MCM)					
			10%	25%	50%	75%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	KHANPUR	6/2005 to 5/2015	20570.45	7476.11	3896.59	1025.32	584.83	NA
2	MATAJI		3998.36	3122.91	1613.49	683.71	312.39	NA
3	PADERDIBADI		10229.22	3196.64	1480.09	515.73	323.24	NA



2.14.5 Land Use Statistics: Table 2.14.2 to Table 2.14.4 present below the land use pattern, gross irrigated area and net irrigated area for Mahi basin as compared to all basins (Region-III).

TABLE 2.14.2: LAND UTILISATION PATTERN OF MAHI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Mahi	24214.69	4814.25	5213.07	2798.30	1239.74	10149.34	5191.12	15340.45
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.14.3: GROSS AREA IRRIGATED BY SOURCES OF MAHI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Mahi	1018.75	0.14	1018.88	337.15	1097.51	2092.93	3190.44	653.90	5200.37
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.14.4: NET AREA IRRIGATED BY SOURCES OF MAHI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
Mahi	1016.72	0.14	1016.85	335.86	1084.36	2046.05	3130.41	650.98	5134.11
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

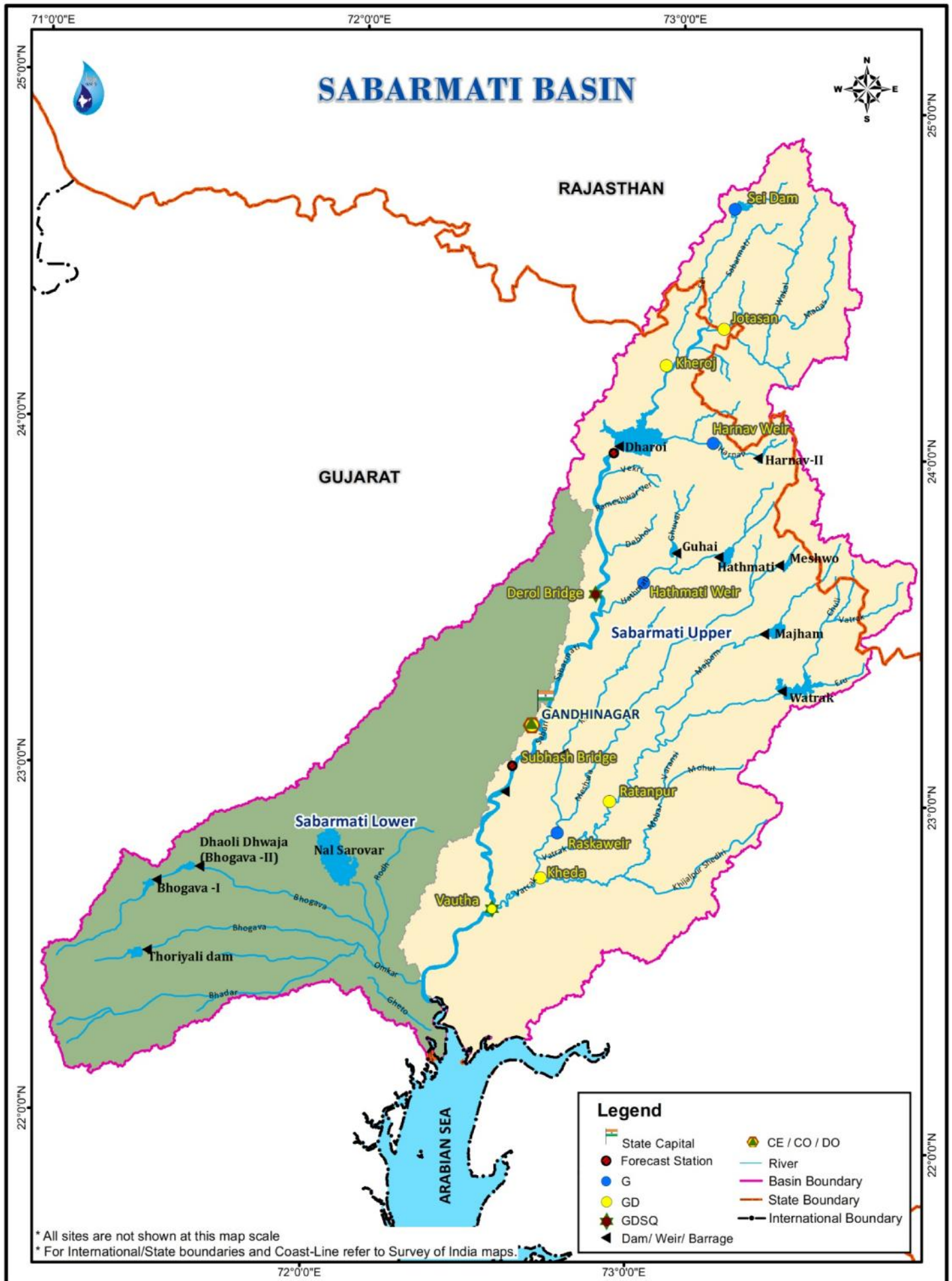
2.15 SABARMATI BASIN

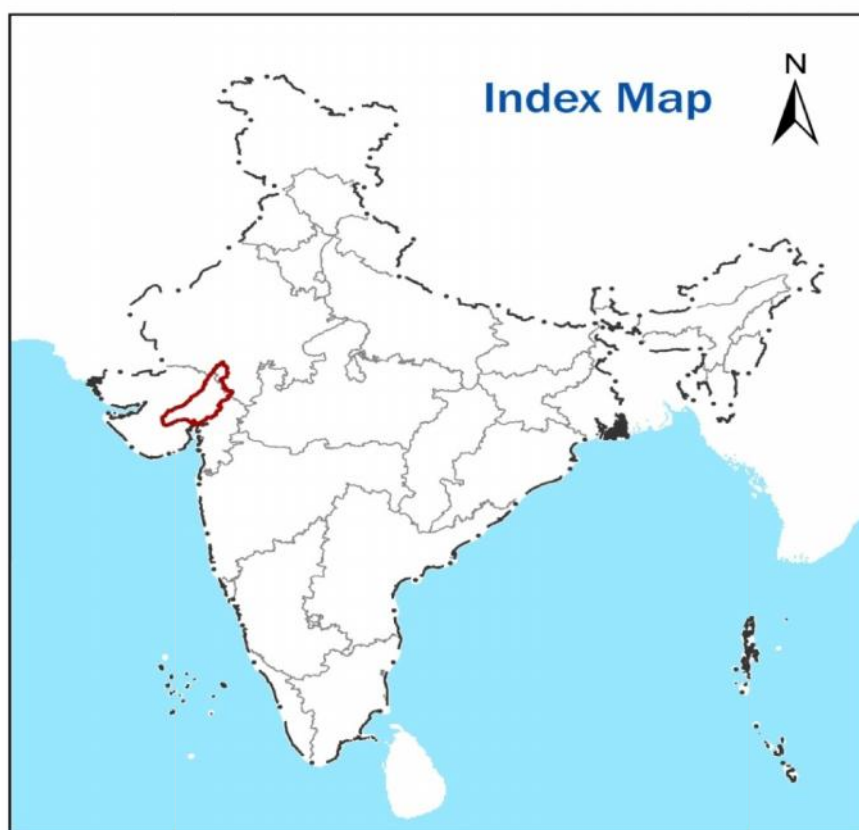
Location: The Sabarmati River is one of the major West flowing inter-state rivers in India, draining into the Gulf of Khambat. The basin is bounded by Aravalli hills in the North and North-east. The ridge separating it from basins of minor streams and draining into Rann of Kutchh and Gulf of Khambat in West and by Gulf of Khambat in South. It is triangular in shape with the main river as the base and the source of the Watrak as the apex point. It originates in the Aravalli hills in the Rajasthan State at an elevation of 762m above msl. The river Sabarmati drains an area of 21,674 sq km with a total length of 371 kms. It lies between $70^{\circ} 58'$ to $73^{\circ} 51'$ east longitudes and $22^{\circ} 15'$ to $24^{\circ} 47'$ north latitudes.

The Sabarmati River, with its origin in Rajasthan, flows generally in south west direction. It enters the Gujarat State and passes through the plains and continues to flow in the same direction and joins the Gulf of Khambat in the Arabian Sea. The Dharoi Dam, Watrak, Meshwo, Moti fatewadi and Hathmati are the major projects in the catchment areas of Sabarmati sub-basin. The basin contains two climatic regions, the northern part of the basin comprises sub tropical wet climate (generally basin area occupied by Gujarat). The major part of the basin comprises tropical wet climate, caused mainly due to existence of Aravalli and the Western Ghats. The temperature of the basin varies from 0° to 42°C . The average rainfall in the Sabarmati basin is about 787.5 mm.

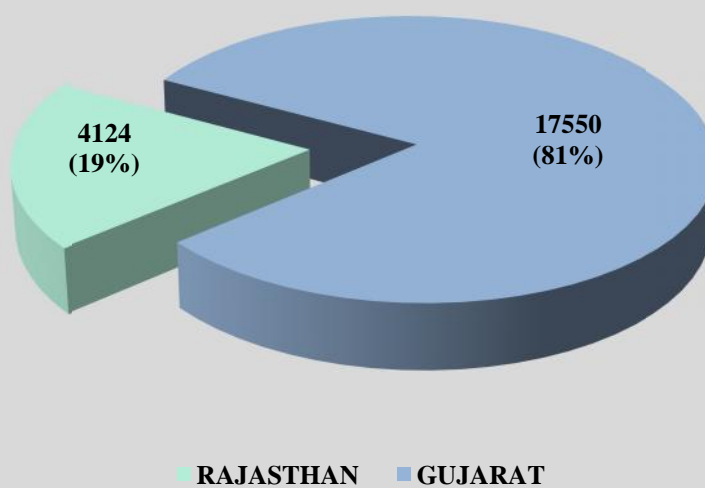
2.15.1 Irrigation Projects: Sabarmati irrigation project (Dharoi Dam), Watrak irrigation project, Moti Fatewadi are major projects in the basin.

2.15.2 Hydrological Observation (H.O.) Sites: There are 13 sites in total in the basin, out of which 7 sites for Gauge(G), 4 for Gauge & Discharge(GD), 1 for Gauge, Discharge, Water Quality (GDQ) and 2 for Gauge, Discharge, Sedimentation and Water Quality(GDSQ).

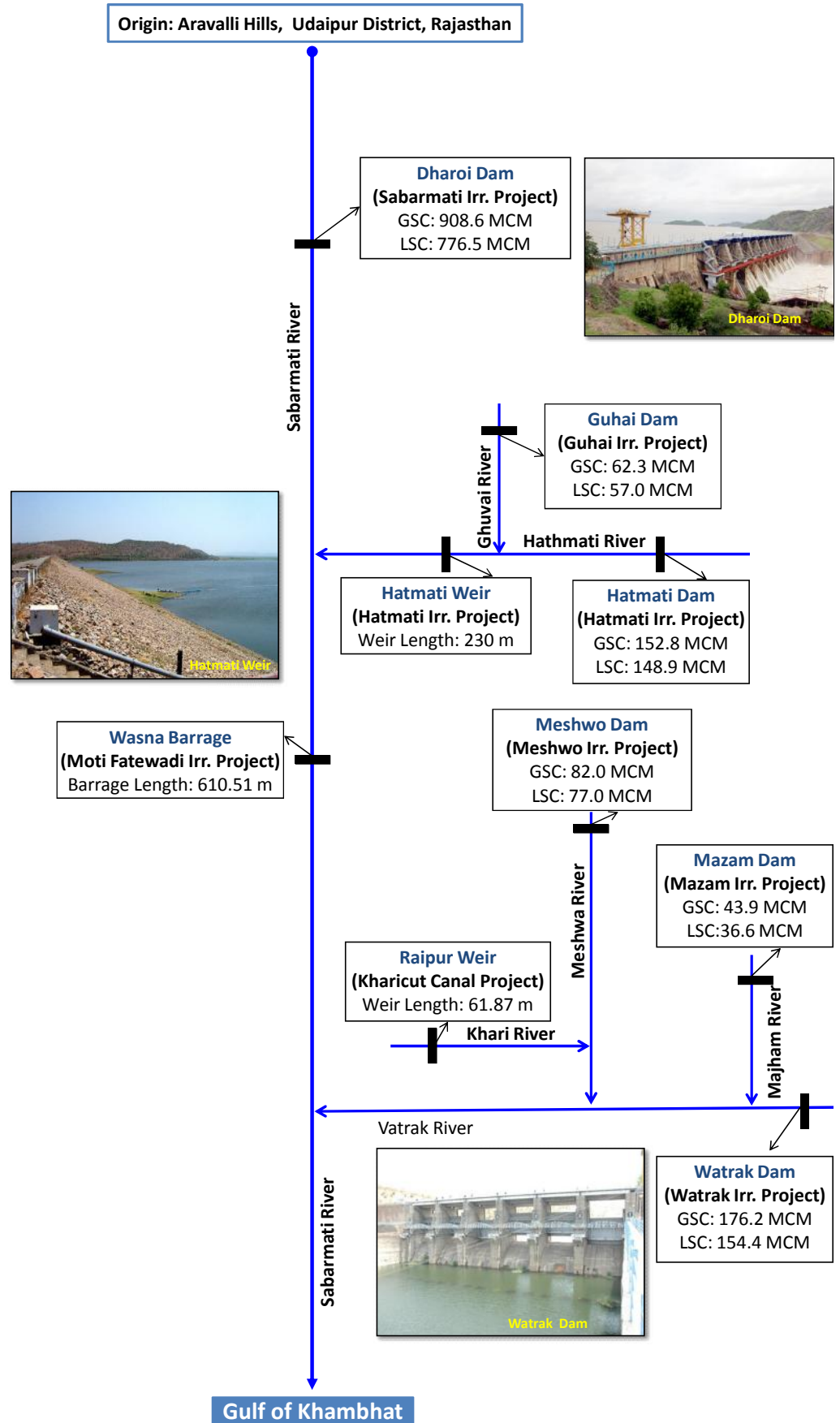




State Wise Sabarmati Basin Area (Sq. km.)



Sabarmati River Flow Line Diagram



2.15.3 Land Use Statistics: Table 2.15.1 to Table 2.15.3 present below the land use pattern, gross irrigated area and net irrigated area for Sabarmati basin as compared to all basins (Region-III).

TABLE 2.15.1: LAND UTILISATION PATTERN OF SABARMATI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
Sabarmati	4675.93	1263.74	1514.84	682.97	315.99	898.39	424.59	1322.98
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.15.2: GROSS AREA IRRIGATED BY SOURCES OF SABARMATI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Gross Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
Sabarmati	22.74	0.00	22.74	37.26	50.05	272.49	322.54	6.96
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.15.3: NET AREA IRRIGATED BY SOURCES OF SABARMATI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin	Net Irrigated Area							
	Canal			Tank	Well			Other Source
	Govt.	Private	Total		Tubewell	Other well	Total	
1	2	3	4	5	6	7	8	9
Sabarmati	22.73	0.00	22.73	36.83	47.43	258.45	305.88	6.71
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

2.16 WEST FLOWING RIVERS OF KUTCH AND SAURASHTRA INCLUDING LUNI

Location: The basin extends over large areas in Rajasthan and Gujarat and covers whole of Diu having an area of 321,851 Sq. km with maximum length and width of 865 km and 445 km. It lies between $67^{\circ} 52'$ to $75^{\circ} 19'$ east longitudes and $20^{\circ} 53'$ to $26^{\circ} 57'$ north latitudes. The basin is bounded by Aravalli range and Gujarat plains on the east, by Rajasthan desert on north, and by the Arabian Sea on the south and the west.

Luni is the major river system of the basin. Other independent rivers of the basin are the Shetrunji, the Bhadar, the Machhu, the Rupen, the Saraswati and the Banas.

The major part of the basin is covered with agriculture accounting to 65.06% of the total area and only 5.25% of the basin is covered by water bodies. Brief descriptions of the rivers are given below.

2.16.1 Luni Basin: The Luni is the only significant river basin in Western Rajasthan which forms the bulk of arid zone. Luni originates from Western slopes of the Aravalli ranges at an elevation of 772m above msl near Ajmer flowing in South West direction and traversing a course of 511 km in Rajasthan before it finally flows into the Rann of Kutchh. Its total catchment 32879 sq km area falls in Rajasthan. Luni basin is situated in between $24^{\circ} 11'$ to $26^{\circ} 43'$ North latitude and $70^{\circ} 37'$ to $74^{\circ} 39'$ East longitude approximately. The peculiarity of this river is that it tends to increase its width rather than deepening the bed because the banks are of soils which are easily erodable whereas beds are of sand. The floods develop and disappear so rapidly that they have no time to scour the bed. The Aravalli ranges forms its East boundary whereas main course of river in Barmer district itself forms North boundary and mostly Banas and initial reach of Chambal River form its Southern boundary. Luni receives all the main tributaries on its left bank except one i.e. Jojari (Mithri) on the right bank. Luni receives ten tributaries namely Lolari, Guhiya, Bandi (Hemawas), Sukri (Hemawas), Sukari, Mithri, Jawai, Khari Bandi and Sugi. Hence the drainage on the left bank of Luni is, therefore, more extensive than on Right Bank. The Luni drains an area of 32,879 sq Km in Rajasthan State only. The rainfall in the basin is erratic and its distribution is uneven in the catchment. The temperature of the basin ranges from 5° to 46°C . There are 2 sites for Gauge and Discharge.

2.16.2 Banas Basin: The river Banas originates from Aravalli hills and descends in a South-Western direction through Rajasthan state and travels through Banaskantha and Mehsana district of Gujarat before it drains into little Rann of Kutchh. The Banas basin is the Northern basin and is situated between $23^{\circ} 30'$ & $24^{\circ} 55'$ north latitudes and $71^{\circ} 15'$ to $73^{\circ} 15'$ east longitudes approximately. Saraswati and Luni basins form the Southern and Northern boundaries of this basin. The Aravalli hills form its eastern extremity. The Banas drains an area of 8,674 sq km out of which nearly 37.69% lies in Rajasthan state and remaining 62.31% falls in Gujarat state. The Banas River rises near Pindwara of Sirohi district of Rajasthan at an elevation of 372.51m above msl. Little Rann of Kutchh is the outfall of Banas river. Sipu is the only right bank tributary of Banas River which drains into the main channel. There are 6 tributaries on the left bank of Banas River namely the Batria, the Sukli, the Sewaran, the Suket, the Balaram and the Khari which drain into the main channel. Hence the draining system on the left bank of the Banas River is more extensive as compared to the right bank area. The Sipu and the Khari are the two important right and left bank tributaries which together drain nearly 37% of the total catchment area of Banas. The Sipu Dam, Swarupgunj and Dantiwada Dam are the major projects in the catchment areas of Banas sub-basin. There are 4 sites for

Gauge only(G), 1 site for Gauge & Discharge (GD), 2 sites for Gauge, Discharge & Water Quality(GDQ) and 1 for Gauge, Discharge, Sedimentation & Water Quality(GDSQ).

2.16.3 Shetrunji Basin: The Shetrunji is one of the major rivers of Saurashtra. The Shetrunji basin is the Eastern most basin of Saurashtra and is situated in between $21^{\circ} 00'$ to $21^{\circ} 47'$ North latitude and $70^{\circ} 50'$ to $72^{\circ} 10'$ East longitude. The river Shetrunji originates at Chachai hills in Gir forest of Junagarh district at an elevation of 380m above msl and flows towards East direction till its confluence with Gulf of Khambat near Santhampur port. The river Shetrunji fertilizes the Amerli and Bhavanagar districts and a small area of Junagarh district of Saurashtra. The Shetrunji drains an area of 5,514 sq km out of which more than 50% is in Amerli district. The total length of the river from its origin to the outfall into the Gulf of Khambat is 182 km. This river receives tidal influence for a length of 5 km from mouth. The Shetrunji receives several tributaries on both banks. There are 9 tributaries having lengths more than 15 km out of which Safara, Shel, Khari and Talaji are the 4 tributaries on the right bank of Shetrunji and the remaining 5 tributaries namely Stali, Gagaria, Rajwal and Kharo are on left bank. The drainage system on left bank of Shetrunji is more extensive as compared to the right bank area. The Stali, Theli and Gagaria are important tributaries feeding from left bank of Shetrunji and drain nearly 34% of total catchment area of river Shetrunji. The *Shetrunji Irrigation Scheme* is the only major project in the catchment areas of the river basin. There is one site for Gauge, Discharge, Sedimentation and Water Quality.

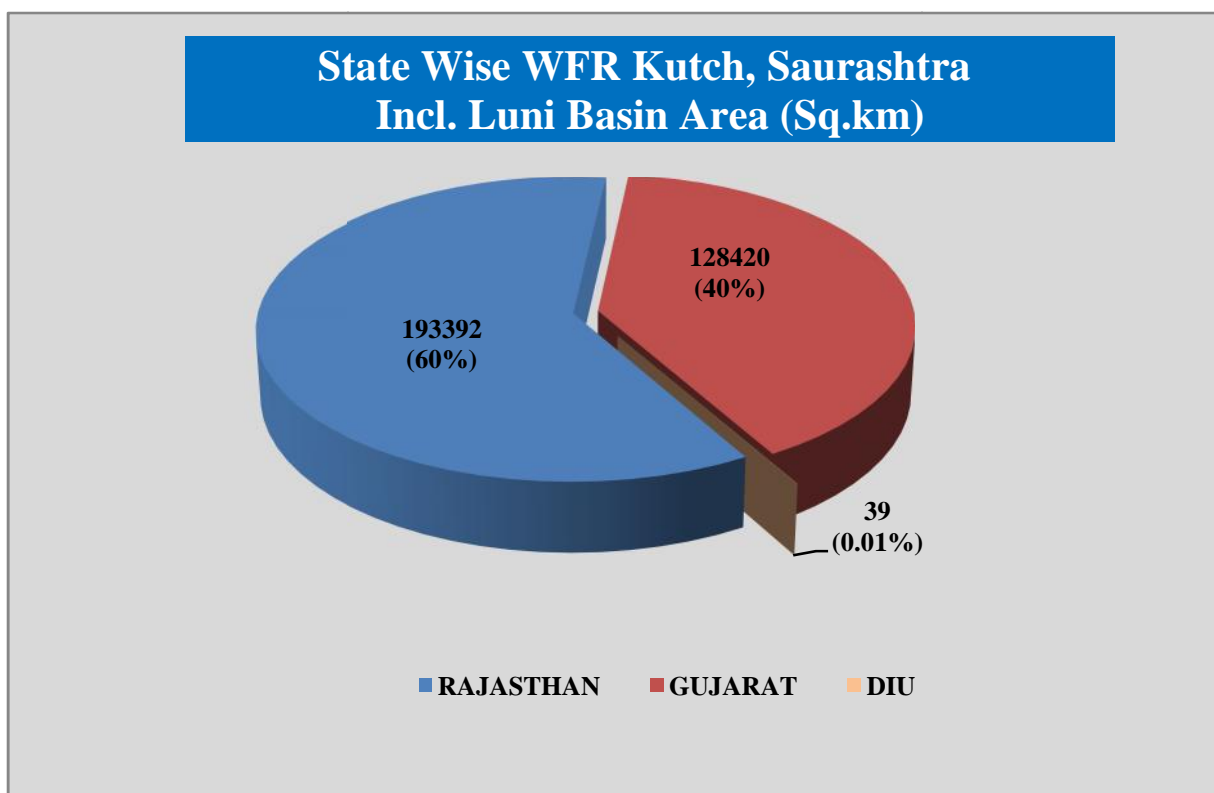
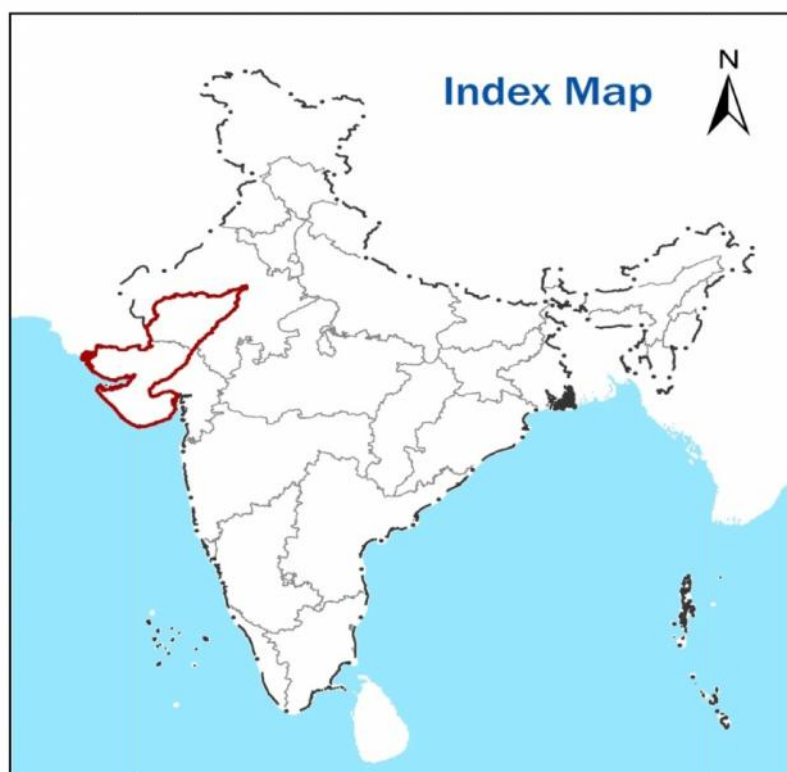
2.16.4 Bhadar Basin: Bhadar is one of the major rivers of Saurashtra and it drains about $1/7^{\text{th}}$ of the area of Saurashtra. The Bhadar basin is the south western basin and situated between $21^{\circ} 25'$ to $22^{\circ} 10'$ north latitude and $69^{\circ} 45'$ to $71^{\circ} 20'$ east longitude. The river Bhadar originates at an elevation of 261m above msl in Vaddi about 26 km north-west of Jasdan in Rajkot district and flows towards south upto Jasdan village and then turns towards south-west upto village Jetpur and finally changes its direction towards west till its confluence with Arabian sea at Navibandar (Porbandar). The Bhadar River, from Jetpur to Porbandar, fertilizes Rajkot, Jamnagar, Amreli and Junagadh district of Saurashtra. The river drains an area of 7,094 sq km out of which 706 sq km is in hill and the rest in plain regions of Saurashtra. The total length of this South West flowing river from its origin to its outfall into the sea is 198 km. For the first 150 km, the river flows in Rajkot district and the rest of 48 km in Junagarh district. The river receives tidal influence for a length of about 26 km from mouth in Junagadh district. The river Bhadar receives several tributaries on both the banks. There are 9 major tributaries having a length of more than 25 km out of which 6 tributaries namely Gondali, Chapparwadi, Phopal, Utawali, Moj and Venu are feeding from right and the remaining 3 tributaries namely Vasavadi, Surwa and Galolia from left. The drainage system on the right bank of river Bhadar is more extensive as compared to the left bank. The *Bhadar Irrigation Scheme* is the only major project in the catchment areas of the river basin. There is one site for Gauge, Discharge, Sedimentation and Water Quality.

2.16.5 Machhu Basin: The Machhu River originates from hilly ranges of Jasdan Sardar and Mandva in Rajkot district and Chotila in Surendranagar district and flows in north westerly direction along the district boundary of Surendranagar and Rajkot upto village Beti and then flows mostly towards north in Rajkot district and finally disappears near Malia in the little Rann of Kachchh. The Catchment area of the basin is 2515 sq km. The complete catchment area is located between $22^{\circ} 10'$ to $23^{\circ} 10'$ north latitude and $70^{\circ} 40'$ to $71^{\circ} 15'$ east longitude. The main tributaries of this river are Beti, Asoi, Machhori and Maha, together account for nearly 42.52% of the total catchment area of Machhu. *Machhu-I* and *Machhu-II* are medium Irrigation projects in the basin. There is one site for Gauge and Discharge.

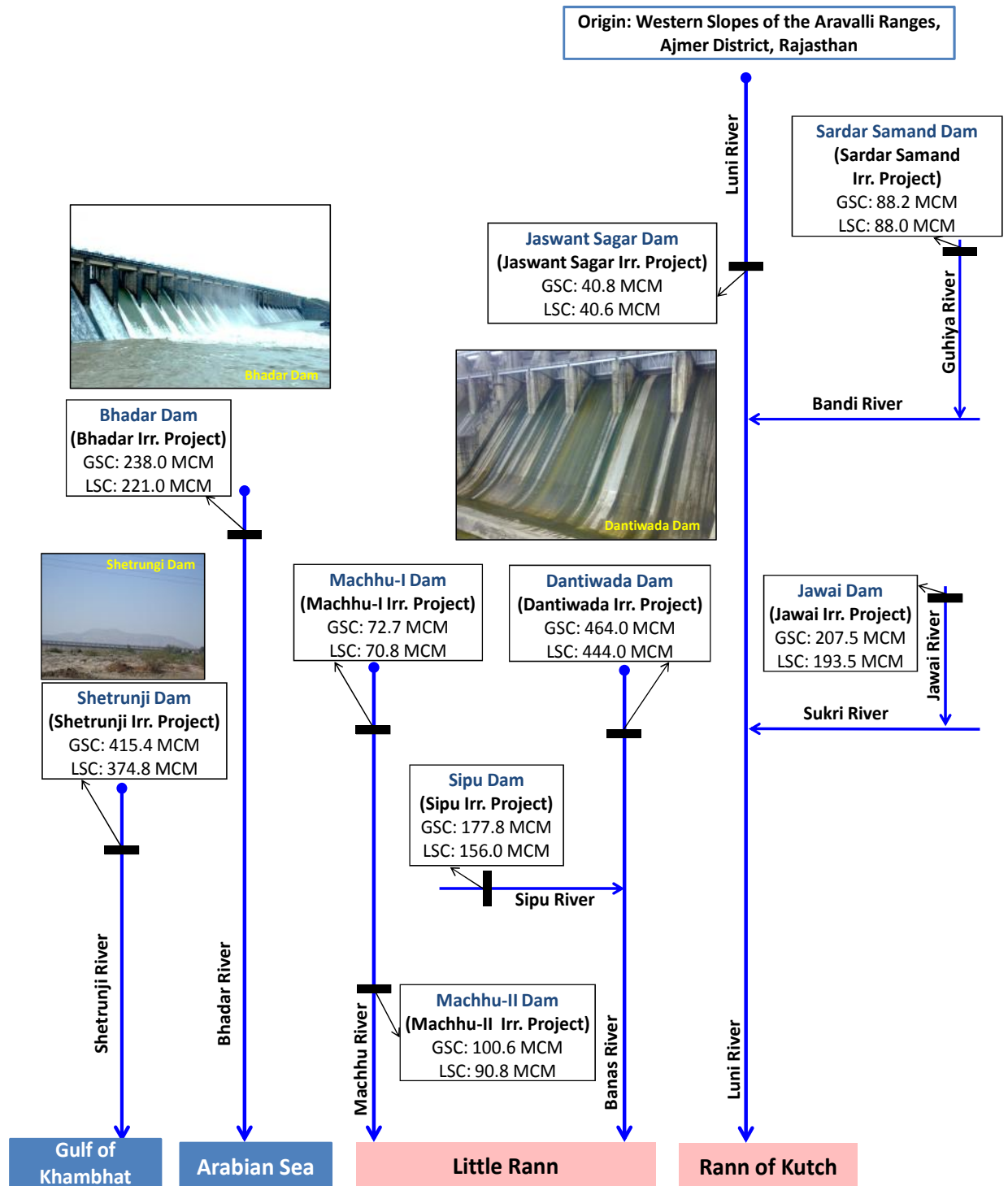
2.16.6 Rupen Basin: The Rupen River originates from taranga hill ranges near Kheralu taluka of Mehsana district of Gujarat at an elevation of 180 metre above metre.s.l and decends in south western direction and travels through Mehsana district before it drains into little Rann of Kachchh. The Rupen basin is a northern basin of Gujarat and is situated between $23^{\circ} 25'$ to $24^{\circ} 00'$ north latitude and $71^{\circ} 30'$ to $72^{\circ} 46'$ east longitude approx. The total drainage area of Rupen River is 2,500 sq km. The important tributaries of Rupen are Pushpavati and Khari. Owing to topographical characteristics the climate is variable in the basin. There is one site for Gauge and Discharge.

2.16.7 Hydrological Observation Sites: There are in total 15 H.O. sites in the basin, out of which 4 sites are for Gauge observations only (G), 5 sites for Gauge & Discharge (GD), 2 sites for Gauge, Discharge & Water Quality (GDQ) and 3 sites for Gauge, Discharge, Sedimentation & Water Quality (GDSQ) and one site for Rainfall measurement (as per 2014-15 data).





WFR Kutch, Saurashtra Including Luni Flow Line Diagram



2.16.8 Land Use Statistics: Table 2.16.1 to Table 2.16.3 present below the land use pattern, gross irrigated area and net irrigated area for the basin as compared to all basins (Region-III).

TABLE 2.16.1: LAND UTILISATION PATTERN OF WFR KUTCH, SAURASHTRA INCLUDING LUNI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

Basin Name	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
		Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9
WFR Kutch, Saurashtra including Luni	74050.13	3255.62	8441.68	8618.05	14984.30	38750.48	8192.85	46943.32
All Basins	1138113.57	284448.26	167142.38	80307.91	142746.75	463468.26	121017.27	584485.52

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.16.2: GROSS AREA IRRIGATED BY SOURCES OF WFR KUTCH, SAURASHTRA INCLUDING LUNI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

LUNI AND ALL RIVER BASINS (REGION-III) DURING 2017-18 (AREA IN SQ. KM.)									
Basin	Gross Irrigated Area								
	Canal			Tank	Well			Other Source	Total
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
WFR Kutch, Saurashtra including Luni	1038.10	0.00	1038.10	129.48	7841.93	5087.80	12929.73	50.62	14147.92
All Basins	70860.31	2737.90	73598.21	12936.97	79040.07	46049.99	125090.06	12823.41	224448.65

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

TABLE 2.16.3: NET AREA IRRIGATED BY SOURCES OF WFR KUTCH, SAURASHTRA INCLUDING LUNI AND ALL RIVER BASINS (REGION-III) DURING 2014-15 (AREA IN SQ. KM.)

LUNI AND ALL RIVER BASINS (REGION-III) DURING 2017-18 (AREA IN SQ. KM.)									
Basin	Net Irrigated Area								Total
	Canal			Tank	Well			Other Source	
	Govt.	Private	Total		Tubewell	Other well	Total		
1	2	3	4	5	6	7	8	9	10
WFR Kutch, Saurashtra including Luni	922.81	0.00	922.81	129.33	5392.19	4045.99	9438.17	44.45	10534.76
All Basins	50650.82	18.18	50669.00	11791.94	59094.18	38943.75	98037.93	25174.25	185673.12

Source : Consolidated data of river basins from the district level data of India-WRIS and Dte. of Economics & Statistics, M/o. Agriculture

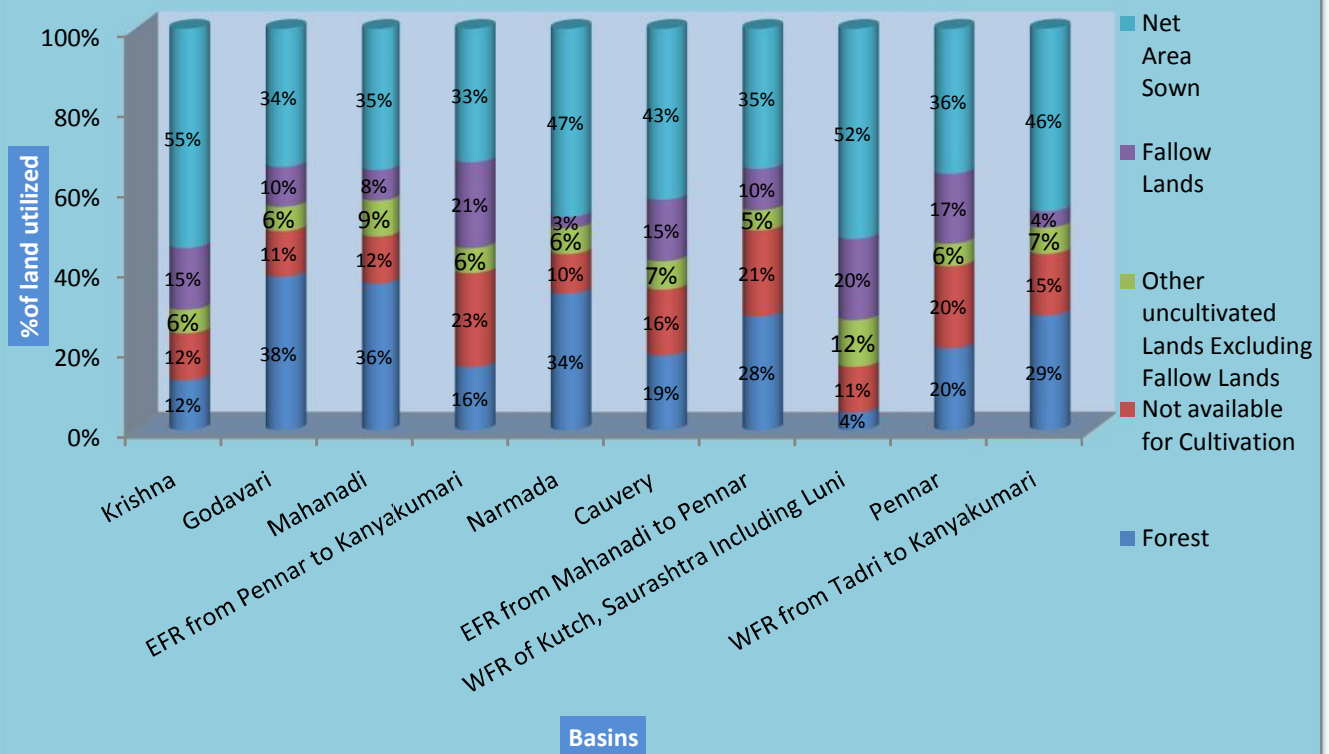
2.16.8 Urban Centre: Ahmedabad & Vadodara are two important cities on west flowing rivers basin.

2.16.9 Industries: There are important industries of Engg Handicraft, Stonework, cement, chemical, Liquor, Sugar, Tex and wools etc.

2.16.10 Minerals: Important minerals found in the basin are Phyllites, gneisses, Quartzite and Granite.

2.17 Land Use Statistics Graphs of the Basins (Region-III)

**FIG A.1: PERCENTAGE OF LAND UTILIZATION PATTERN OF TOP 10 BASINS
BASED ON REPORTING AREA OF LAND UTILISATION DURING 2014-15**



**FIG A.2: BASIN WISE TOP 10 GROSS AREA (in '000 SQ. KM.)
IRRIGATED BY SOURCES FOR THE YEAR ENDING 2014-15**

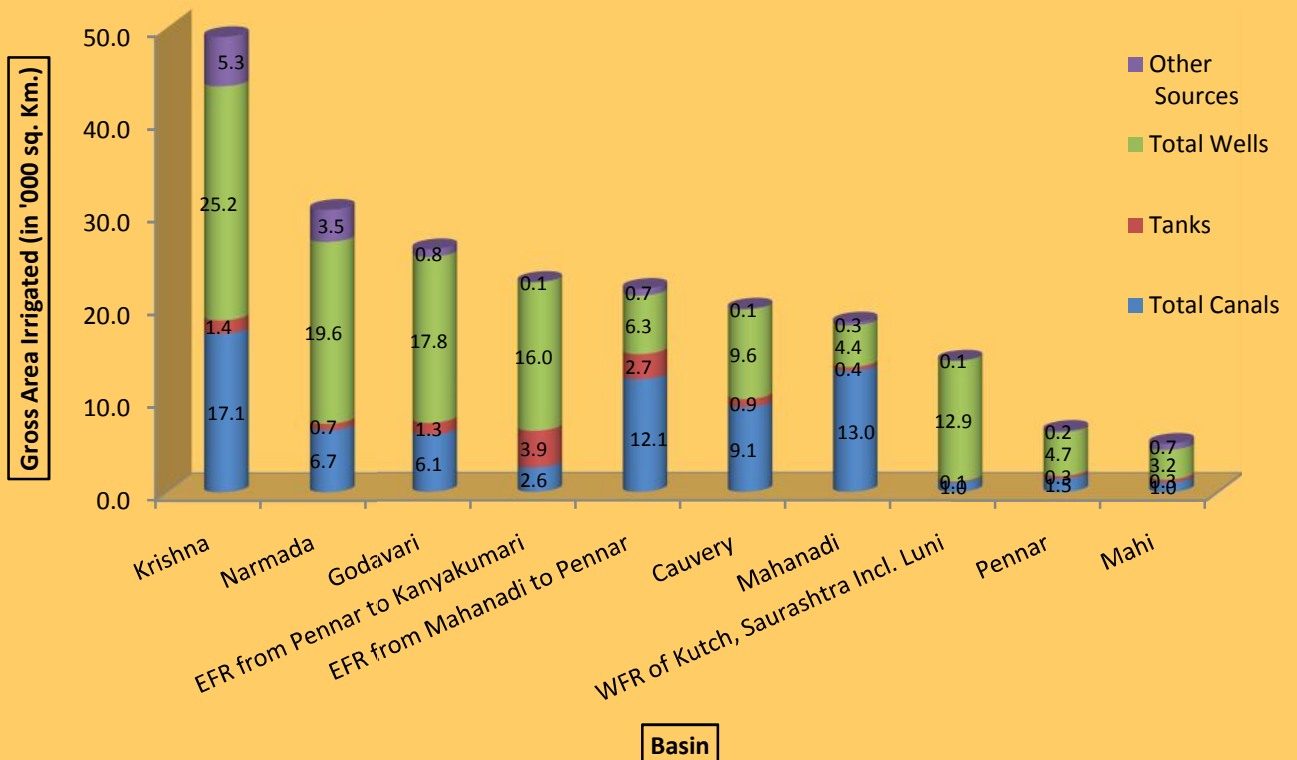


FIG A.3 : GROSS AREA IRRIGATED (IN '000 SQ. KM.) BY SOURCES ACROSS RIVER BASINS DURING THE YEAR 2014-15

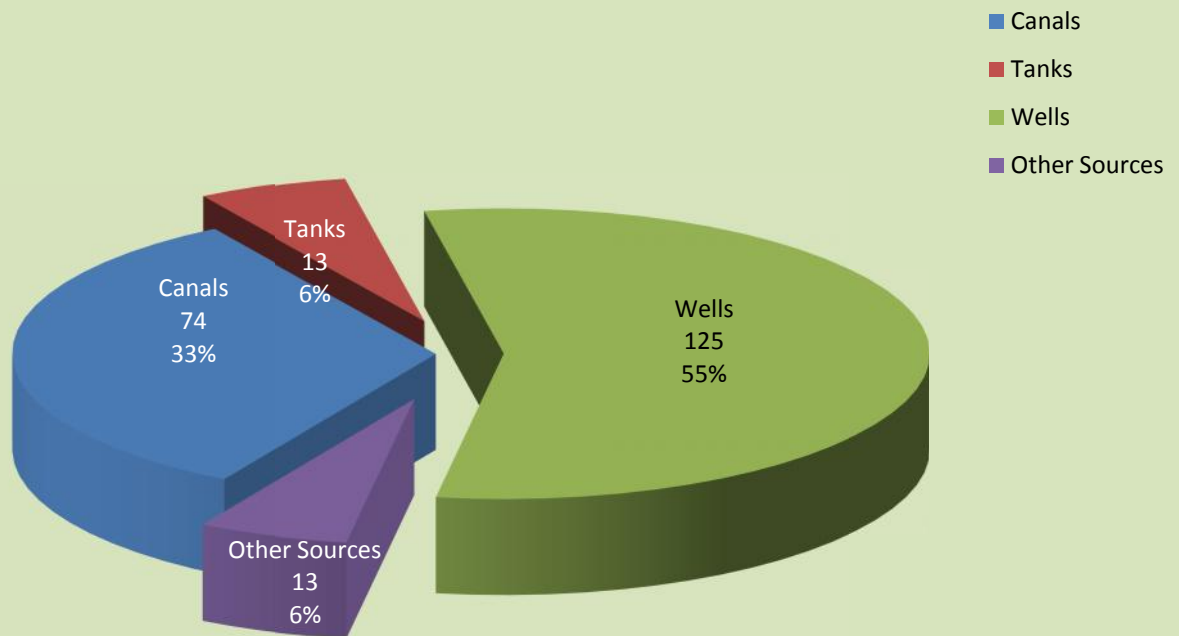
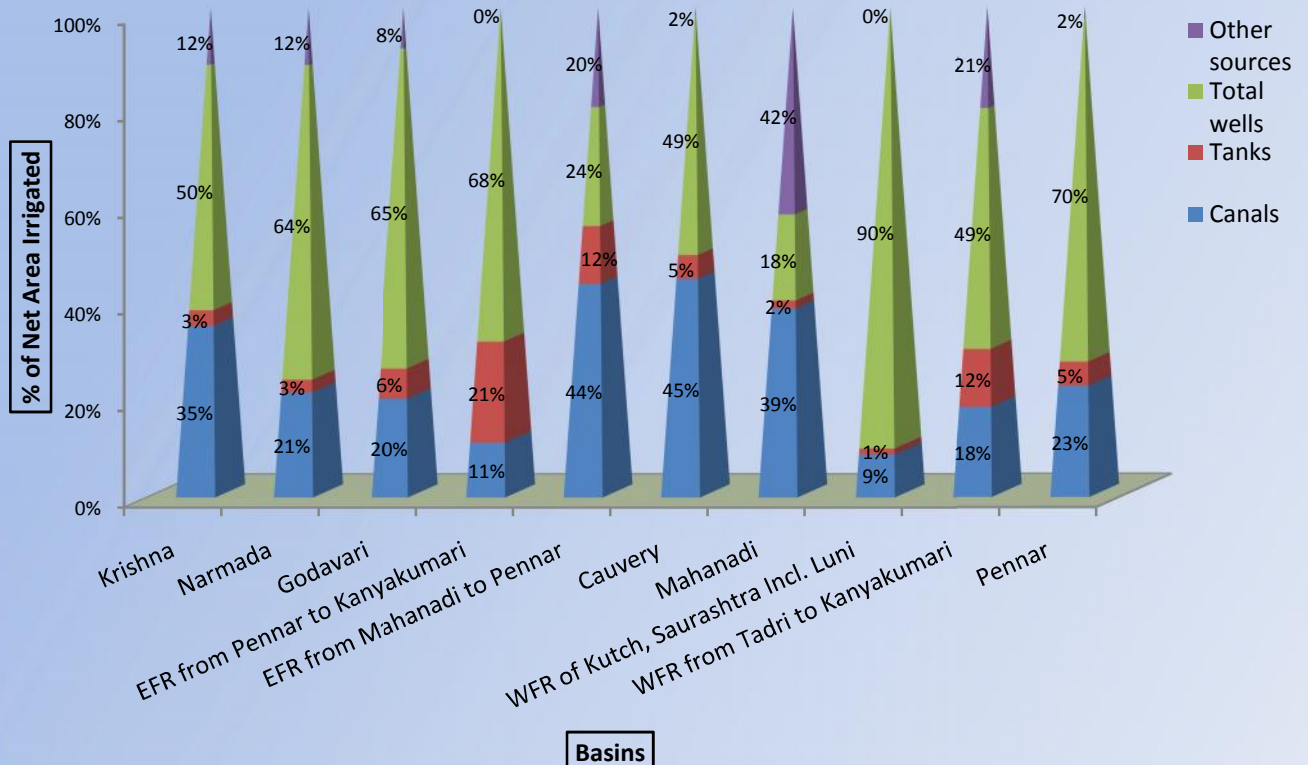


FIG A.4: PERCENTAGE OF NET AREA IRRIGATED FOR TOP 10 NET AREA IRRIGATED BY SOURCES ACROSS RIVER BASINS DURING 2014-15



Appendix

Tables on Hydrology, Land Use Statistics and Ground Water Resources of the River Basins (Region-III)

Table 1 : Avg. Annual Flow & Storage Capacity by River Basin (As on 31.03.2016)

Unit: (BCM)

Sl. No.	Basin	Average Annual Flow	Live Storage Capacities upto March, 2016		
			Completed Project	Project Under Construction	Total
1	2	3	4	5	6
1	INDUS	73.30	16.22	0.10	16.32
2	a) GANGA	525.00	48.68	7.65	56.33
	b) BRAHMAPUTRA	537.20	1.72	0.80	2.51
	c) BARAK & OTHERS	48.40	0.72	9.17	9.89
3	GODAVARI	110.50	35.03	8.41	43.44
4	KRISHNA	78.10	50.65	4.16	54.81
5	CAUVERY	21.40	9.08	0.02	9.10
6	PENNAR	6.30	2.94	2.14	5.08
7	EFR FROM MAHANADI TO GODAVARI AND KRISHNA TO PENNAR	22.50	2.68	1.18	3.86
8	EFR B/W PENNAR AND KANYAKUMARI	16.50	1.44	0.02	1.46
9	MAHANADI	66.90	13.01	1.46	14.47
10	BRAHMANI & BAITARNI	28.50	5.52	0.70	6.22
11	SUBERNAREKHA	12.40	0.31	2.15	2.46
12	SABARMATI	3.80	1.58	0.11	1.69
13	MAHI	11.00	5.02	0.15	5.17
14	WFR OF KUTCH, SAURASHTRA INCLUDING LUNI	15.10	6.34	0.51	6.85
15	NARMADA	45.60	17.62	6.83	24.46
16	TAPI	14.90	9.14	1.56	10.70
17	WFR FROM TAPI TO TADRI	87.40	14.67	2.43	17.10
18	WFR FROM TADRI TO KANYAKUMARI	113.50	11.02	1.42	12.44
19	AREA OF INLAND DRAINAGE OF RAJASTHAN	Negl.	0.00	0.00	0.00
20	MINOR RIVER BASINS DRAINING INTO MYANMAR AND BENGLADESH	31.00	0.02	0.00	0.02
GRAND TOTAL		1869.40	253.39	50.96	304.35

Source : WM & B.P. Directorate, Central Water Commission.

NOTE: Under column No. 4 only completed projects in the River Basins (Sl. No. 1 to 20) having Live Storage more than 10 MCM are included.

BCM: BILLION CUBIC METRE
MCM: MILLION CUBIC METRE

EFR: East Flowing Rivers
WFR: West Flowing Rivers

Table 2 : Salient Features of Different River Basins during 2014 - 15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (ao-b')	Longitude (xo-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.1 Basin: Mahanadi										
2.1	Rises from Farsiya village near Nagri Town in Dhamtari Distt. of Chhattisgarh at an elevation of 442 m. Length 851 Km.	Chhattisgarh Odisha Jharkhand Maharashtra Madhya Pradesh	74982 65580 635 238 154	Mahanadi Pairi Seonath Jonk Hasdeo Mand Ib Ong Tel	48282 3540 30725 3681 9770 5239 12460 5097 22796	19° 8' to 23° 32' N	80° 28' to 86° 43' E	20.01 to 39.56	1291.92	-
		Total	141589	Total	141589					

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan, P.O. Bhoi Nagar, Bhubaneswar (Ordisa) (2014 to 2015) Mahanadi Basin.

(Contd.)

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.1 Basin: Mahanadi										
2.1	Mahanadi	G= 20 GD= 4 GQ= 1 GDQ= 1 GDSQ= 16 RF=6 Total = 48	Iron Ores, Coal,	Iron Steel Copper Cement Paper and Aluminium	47815 MCM	Black Red	Hirakud Dam Tandula Hasdeo Bango Dam Mand Diversion Project Ib Division Scheme Sondur Dam Barupa Barrage Mahanadi Main Canal Kharang Tank Manairi Tank Tairi Kodar reservior Mahanadi Delta Ong Diversion Salaki	8141.0 322.0 3417.0 - - - 198 - - 160.23	5892.0 312.0 3046.0 - - - 179 - 192.32 148.91	- - - - - - -

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan, P.O. Bhoi Nagar, Bhubaneswar (Ordisa) (2014-15) Mahanadi Basin.

Table 2 : Salient Features of Different River Basins during 2014 - 15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (ao-b')	Longitude (xo-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.2	Basin: Subernarekha									
2.2	Subernarekha Rises from Nagri village in Ranchi Dist. of Jharkhand at an elevation of 600 m. Length 395 Km	Jharkhand Odisha West Bangal	13685 11964 3547	Subernarekha Kanchi Karkari Kharkai Raru Garra Dulang	7383 1096 1341 6611 680 640 1200	21°15' to 23°34' N	85°8' to 87°32' E	9 to 32.4	1800	-
		Total	29196	Total	18951					

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan,Bhoi Nagar, Bhubaneswar (2014 -15)Subarnarekha, Burhabalang & Baitarni Basin.

(Contd.)

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.2	Basin: Subernarekha									
2.2	Subernarekha (water withdrawals during 1997-99)	G= 5 GD=2 GDQ=1 GDSQ=4 Total = 12	Coal, Iron Ores, Bauxite, Copper Chromium Gold, Vanadium Lime stone,Dolomite Asbestos China Clay, Talc and Building Stone	Tobacco Products, Cement, Asbestos Sheets, Ceramics, Glass, Coaches & Locomotive , Automobiles, Agricultural Equipment, Wires & Cables, Iron & Steel Machinery, Metal Tubes & conduits, Copper & Brass, Chemical Acids & Caustics, Fertilizer, Soaps	6628 (1971-72 to 2013-14) Ghatshila (14176)	Gravelly Sandy Loams Alluvium & Black Clays Laterite Red etc.	1. Kanchi Irrigation Scheme 2. Chandil Dan 3. Kharkai Dam Icha Dam 4. Jambhira	- 1963 1048 216	- 1611 931 214.10	- - - -

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan,Bhoi Nagar, Bhubaneswar (Ordisa) (2014-15)Subarnarekha, Burhabalang & Baitarni Basin.

Table 2 : Salient Features of Different River Basins during 2014 - 15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq. Km)	Latitude (ao-b')	Longitude (xo-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.3	Brahmani and Baitarni									
2.3.1	Brahmani (South Koel) Rises from Nagri village in Ranchi Distt. of Jharkhand at an elevation of 600 m. Length 799 Km.	Jharkhand Orissa Chhatisgarh	15757 34749 1316	Karo	2741	20-28 to 23-35	83-52 to 87-03	10 to 43	1460	Average Monthly Evaporation varies from 18 to 135
2.3.2	Baitarani Rises in the hill ranges of Keonjhar Distt. of Orissa near Manka-rancho village at an elevation of 900 m. Length 355 Km			Salindi	2087					
				Kusai	1013	20-35 to 22-15	85-10 to 87-03	12 to 38	1450	-
				Orarai	957					
				Kangira	533					
				Deo	842					
				Kanjhari	579					
				Sita	588					
		Total	51822	Kusal	618					

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan, Bhoi Nagar, Bhubaneswar(2014-15) Subarnarekha, Burhabalang & Baitarni Basin.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014 - 15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.3	Brahmani and Baitarni									
2.3.1	Brahmani	G= 2 GD=1 GQ=1 GDSQ=5 Total = 9	Iron Ore, Copper, Chromite, Coal, Manganese Lime stone, Dolomite, Lead, Fire-Clay Fire-Clay, Bauxite & China-Clay	Steel Plants Cement Aluminium Explosive Chemical Machine Tools Fertilizer Plant	16961 (1980-81 to 2013-14) Jenapur (33955)	Red & Yellow Mixed Red & Black Red Sandy Red Loamy & Coastal Alluvium	Rengali	4400	3413.71	-
2.3.2	Baitarani	G = 3 GDSQ=2 RF=1 Total = 6	Iron Ore, Copper, Chromite, Asbestos, Manganese, Atomic Minerals, China Clay & Soap Stone	Ferro - Manganese Plant Sponge Iron Plant	4804 (1972-73 to 2013-14) Anandpur (8570)	Red & Yellow Laterite Alluvial	Akhuapada Kanupur Irrigation Project Salandi Baitarni System Anandpur Barrage	- 331.02 565 - -	- 268.97 556.50 - -	451.46 - - Under Construction

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan, Bhoi Nagar, Bhubaneswar (Orisha) (2014-15) Subarnarekha, Burhabalang & Baitarni Basin.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b ')	Longitude (x°-y ')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.4	Godavari									
2.4	Rises in the western Ghat near Thriambak hills in the Nasik distt. of Maharashtra at an elevation of 1067 m. Length 1465 Km.	Andhra Pradesh Karnataka Madhya Pradesh. Maharashtra Odisha Chhatisgarh Puducherry	72835 4405 5220 152199 17752 60035 366	Godavari (Upper) Pravara Purna Manjira Godavari(Middle) Maner Pranhitha Godavari(Lower) Indravathi Sabari Penganga Wardha	33502 6537 15579 30844 17205 13106 61093 24869 41665 20427 23898 24087	16° 19' to 22° 34' N	73° 24' to 83° 4' E	15 to 39	1042.75	Mean daily evaporation varies from about 5 mm near coastal region to 16.6 mm in uper region.
		Total	312812	Total	312812					

Source : Water Year Book (June 2014 - May 2015) Gadavari.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

	Basin Name	Number of Hydrological Observation Sites	Principal Minerals	Major Industries	Average Annual Runoff(MCM) at terminal site with Catchment area (sq. km)	Soil Charastirctics	Major Projects Name	Gross Storage (MCM)	Live Storage (MCM)	Water Withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.4	Godavari									
2.4	Godavari	G = 26 GD = 31 GDQ = 1 GDSQ = 17 RF = 1 Total = 76	Bauxite, Manganee, iron Ore, Coal, Lead, Zinc, Corundum	Paper, timber, Other timber products Rice milling, cotton, Ginning, Processing, Spinning & Weaving, Manufacture of various textiles, Extraction of oil from Ground Nut & other oil seeds, Manufacture of sugar.	Runoff =86691 MCM, 06/1966 to 05/2015 Polavaram, Catchment Area = 307800 sqkm.	Black,Red, Laterite, Alluvium, Mixed, Saline & Alkaline	Waghed Ozarkhed Karanjawan Palkhed Gangapur N. Madmeswar Jayakwadi Stage 1 Purna Mula Bhandaradara Manar Adhole S.R.S Project St Kadam Nizamsagar Lower Maner Maner Project Manjira Dhuti Weir Bagh Idiadoh Cotton Barrage Lakhanavaram Wainganga Canal Surthi System Kodwa Godavari (Dama) Pravara Upper Kolab Lower Sileru	76.48 67.96 175.56 21.24 215.8 - 2909.00 934.46 735.8 312.6 67.68 30.00 3172.00 186.8 841.3 - 85.52 - 15.43 269.00 - - 60.46 - - - - -	70 62.5 166.2 21.24 203.8 - 2170.00 809.3 636.8 307.53 49.27 27.6 2322.00 137.1 724.92 - 69.66 - 7.79 241.00 - - 47.39 - - -	

Source : Water Year Book (June 2014 - May 2015) Gadavari.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b ')	Longitude (x°-y ')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.5	Basin: Krishna									
2.5	Krishna Rises from near Mahabaleshwar about 64 Km. from Arabian Sea at an elevation of 1337 m. Length 1401 Km.	Maharashtra Karnataka Andhra Pradesh Total	68,259 1,13,497 77,192 2,58,948	1) Koyna 2) Varna 3) Panchganga 4) Dudhganga 5) Ghataprabha 6) Don 7) Malaprabha 8) Bhima 9) Tungabhadra 10) Swarnamukhi 11) Dindi 12) Peddavagu 13) Halia 14) Musi 15) Paleru 16) Munneru 17) Main Krishna	4890 1948 2575 2350 8829 2486 11549 70614 71417 2585 3490 2343 3780 11212 3263 10409 258948	13° 10' to 19° 22' N	73° 17' to 81° 9' E		417.2	

Source : Krishna Basin, Daily Stage-Discharge Data (Vol. I) (June 2014 - May 2015).

(Contd.)...

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.5	Basin: Krishna									
2.5	Krishna Mahabaleshwar Western Ghats Altitude: 1337 M Length: 1401 Km.	G = 15 GD = 12 GQ = 1 GDS = 1 GDQ = 10 GDSQ = 13 Total = 52	Gold Bauxite Limestone Iron ore Manganese Quartz Copper Redoxide Soapstone	Textiles Sugar Chemical Cement Automobile Engineering Nuclear	Site: Vijayawada Av. Annual flow 21421 MCM Catchment Area 2,51,360 Sq.Km.	black soils (regur), red soils, laterite and lateritic soils, alluvium, mixed soils (red and black, red and yellow, etc.) and saline and alkaline soils	1) Radhanagari 2) Ghod 3) Khadakwasla 4) Vir Dam 5) Koyna 6) Bhadra 7) Tungabhadra 8) Almatti 9) Narayanpur 10) P.D. Jurala 11) Musi 12) Srisailem 13) Nagarjuna Sagar 14) Prakasam Barrage	236.8 216.3 85.9 278.5 2797.5 2023 3764 1196 1066 338.1 136.9 8722 11560 87	219.9 170.7 62.6 265.8 2677.7 1635 3700 843 863 192.7 130.3 7164 5733 65	

Source : Krishna Basin, Daily Stage-Discharge Data (Vol. I) (June 2014 - May 2015)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq. Km)	Latitude (a°-b ')	Longitude (x°-y ')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.6	Basin: Cauvery									
2.6	Originate at Talacauvery in Coorg Distt. of Karnataka at an elevation of 1541 m. Length 800 Kms.	Karnataka Tamil Nadu Kerala Puducherry	34273 43856 2866 160	Harangi Hemavati Lakshmana Tirtha Kabani Shinsha Arkavathi Bhawani Amravathi Others	717 5410 1690 7040 8469 4150 6154 8380 39145	10° 9' to 13° 30' N	75° 27' to 79° 54' E	20 to 30	500 to 3800	Annual 1500 to 2500
		Total	81155	Total	81155					

Source : Water Year Book (June 2014 - May 2015) Cauvery.

(Contd.)

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.6	Basin: Cauvery									
2.6	Cauvery	GDQ = 19 GDSQ = 15 Total = 34	Stone Mining	Paper Mills Sugar Mills Chemical Factory Cotton Mills	4877 MCM (2014 -15) Site: Musiri (66243)	Black Cotton Red Laterite Alluvial Forest	Krishnaraja Sagar Hemavathi Mettur Lower Bhavani Kabini Grand Anicut Lower Coleroon Anicut Harangi	1400.35 1050.62 2708.79 928.80 552.74	1275.69 1012.60 2646.77 907.80 453.06	

Source : Water Year Book (June 2014 - May 2015) Cauvery.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitute (x°-y')	Temprature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.7	Basin: Pennar									
2.7	Pennar Rises from Chennakesava Hills of Nandidurg range in Karnataka Length 597 Km.	Karnataka Andhra Pd.	6937 48276	Jayamangali Chitravathi Kunderu Papagini Sagileru Cheyyeru	1282 5908 8057 7423 3077 7325	13° 18' to 15° 49' N	77° 1' to 80° 10' E	15.2 to 40.9	508 to 988	
		Total	55213							

Source : Water Year Book (June 2014 - May 2015) East Flowing Rivers Basin Vol.I, Stream Flow & Suspended Sediment Data.

(Contd.)

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.7	Basin: Pennar									
2.7	Pennar	GDQ= 6 GDSQ= 2 Total = 8	Guvalacheruvu Quartzite, Vempallydolomite, Lime Stone		09 Nellore (50800)	Red, Black, Sandy	Somasila Pulivendula Branch Canal Tungabhadra RB High Level Canal Stage-I & II	2093.00		

Source : Water Year Book (June 2014 - May 2015) East Flowing Rivers Basin Vol.I, Stream Flow & Suspended Sediment Data.

Table 2 : Salient Features of Different River Basins during 2014 -15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (ao-b')	Longitude (xo-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.8	Basin: East Flowing Rivers from Mahandi to Pennar									
2.8.1	Rushikulya Rises from Matabarhi village of Kandhamal Distt. Of Orissa at an elevation of 1000 m. Lenth 146 Km	Orissa	7700	Rushikulya Baghua Barhanadi Pathama Ghodapada	2798 736 2353 663 1150	19-07 to 20-19	84-01 to 85-06	12 to 44	1360	-
	Total		7700	Total	7700					
2.8.2	Vamsadhara Rises from Near Lanjigah village in Kalahandi Distt. Of Orissa Length 221 Km	Orissa Andhra Pradesh	8015 2815	Vamsadhara Harbhanghi(Ganguda) Sanna Nadhi Mahendrathanaya Chauldua Phalrhalia	5458 1689 1276 1115 768 524	18-15 to 19-55	83-20 to 84-20	12 to 43	1400	-
	Total		10830	Total	10830					
2.8.3	Sarda Elevation of Origin is 1000 m. Length 104 Kms.	Andhra Pradesh	2665			17-25 to 18-17	82-32 to 83-06	18 to 42.5	1000	-
	Total		2665							
2.8.4	Nagavali Rises from Near Lakhbahal village in Kalahandi Distt. Of Orissa at an elevation 1300 m. Length 217 Km.	Orissa Andhra Pradesh	4462 5048	Nagavali Janjhavati Suvaarnamukhi Vegavathi Others	5704 931 1275 994 606	18-10 to 19-44	82-53 to 84-05	16 to 40	1000	-
	Total		9510	Total	9510					
2.8.5	Gundlakama Rises near Iskagudem Village in Kurmool Distt. of Andhra Pd. at an elevation of 600 m. Length 220 Km.	Andhra Pd.	8494	Kandleru	7681	15-38	78-47			
	Total		8494							
2.8.6	Paleru Rises from near Gogulapalle Village in Nellore Distt. of Andhra Pradesh at an elevation of 325 m. Length 104 Km.	Andhra Pd.	2483			15-17	79-13			
	Total		2483							

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan, Bhoi Nagar, Bhubaneswar (2014-15)Rushikulya, Vamsadhara, Sarada & Nagavali Basin.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014 -15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics		Major Projects		
							Name	Gross Storage	Live Storage	Water withdrawal
								(MCM)	(MCM)	(MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.8	Basin: East Flowing Rivers from Mahandi to Pennar									
2.8.1	Rushikulya (water withdrawals during 1997-99)	G=2 GDSQ=1 Total = 3	Clay, Lime Stone, Manganese, Sand Talc, Black Sand & Grinding Material	Chemical Sugar Spinning Mills	2214 (1993-94 to 2013-2014) Purushottampur (7112)	Red & Yellow Laterite Alluvial Saline	Rushikulya System	-	-	-
2.8.2	Vamsadhara (water withdrawals during 1997-99)	G=5 GD= 1 GDSQ=1 Total = 7	Manganese, Grayphite, Lime Stone, Bauxite, Mica&Quaartz	No large scale Induttries	2589 '(1971-72 to 2013-2014) Kashi Nagar '(7820)	Red & Black Red Sandy Black Laterite Yellow	Gotta Barrage, Neradi Barrage	-	-	-
2.8.3	Sarda (water Withdrawals during 1997-99)	GD = 1	Manganese Grayphite, Aluminium Bauxite & Mica Quaaartz, Fire Clay	Steel Plant	622 '(1991-92 to 2013-2014) Anakapalli (2090)	Red & Coastal Sands Laterite Alluvial Forest	-	-	-	-
2.8.4	Nagavali (water withdrawals during 1997-99)	GDSQ=1	Manganese Grayphite Lime Stone Bauxite & Mica,Quartz	There is no Large scale Industries.	2573 (1991-92 to 2013-2014) Srikakulam (9500)	Coastal Sand Red Mixed Laterite Forest	Thotapally Narayan Puram Jaiyavathi	- - -	- - -	189.73 79.97 113.27
2.8.5	Gundlakamma	GDSQ=1			354 Marella (7681)					
2.8.6	Paleru				N.A					

Source : CE, Mahanadi & Eastern Rivers Organisation, CWC, Mahanadi Bhawan, Bhoi Nagar, Bhubaneshwar (2014 -15) Rushikulya, Vamsadhara, Sarada & Nagavali Basin.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq. Km)	Latitude (a°-b ')	Longitute (x°-y ')	Temprature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.9	Basin: East Flowing Rivers from Pennar to Kanyakumari									
2.9.1	Swarnamukhi Rises from Pakada village in Chittur Distt. of Andhra Pd. at an elevation of 300 m. Length 130 Km.	Andhra Pd.	3225			13-28	79-09	22.5 to 32	762 to 1270	
	Total		3225							
2.9.2	Kalingi Rises near Kalahasti in Andhra Pradesh Length 76 Km.	Andhra Pd.	5927	Kalleru						
	Total		5927							
2.9.3	Palar Rises beyond Talag- rore village in Kolar Distt. of Karnataka at an elevation of 900 m Length 348 Km.	Karnataka Andhra Pd. Tamil Nadu	3044 4681 10146	Poini Cheyyar Others	2400 1953 13518	12-39 to 12-54	78-32 to 79-56	22.5 to 32.5	762 to 1270	
	Total		17871		17871					
2.9.4	Ponnaiyar Rises near Hongashenhalli Village in Kolar Distt. of Karnataka at an elevation of 900m. Length 396 Km.	Karnataka Andhra Pradesh Tamil Nadu	3530 210 12279			11-45 to 13-30	77-33 to 79-47	25 to 30	762 to 1270	
	Total		16019							
2.9.5	Vellar Rises near village Tumba in Chottori Hills of Eastern Ghats in Salem Distt. of Tamil Nadu at an elevation of 900 m. Length 210 Kms	Tamil Nadu	8922							
	Total		8922							

Source : Water Year Book (June 2014 - May 2015) East Flowing Rivers Basin Vol.I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.9	Basin: East Flowing Rivers from Pennar to Kanyakumari									
2.9.1	Swarnamukhi	GDQ = 1			24 Naidupeta (2650)					
2.9.2	Kalingi	GDSQ=1			18 Sullurpet (5927)					
2.9.3	Palar	GDQ= 4			2 Chengalpattu (16230)					
2.9.4	Ponnaiyar	GDQ=1 GDSQ=2 Total = 3	Lime Stone, Sand Stone, Quartzite		0 Villupuram (12900)	Krishnagiri Sathanur Reservoir	66.10 228.91			
2.9.5	Vellar	GDQ=1			3 Kudalaiyathur (7890)		Vellar			

Source : Water Year Book (June 2014 - May 2015) East Flowing Rivers Basin Vol.I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b°)	Longitute (x°-y°)	Temprature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.9	Basin: East Flowing Rivers from Pennar to Kanyakumari									
2.9.6	Vaigai : Rises in Western slopes of Varusha- nadu Hills near Kottaimalai in Madurai Distt. of Tamil Nadu at an elevation of 1200 m. Length 258 Km.	Tamil Nadu	7741	Manjalar Suruliyar Varahanadi Others	375 1210 380 5776	9-17 to 09-32	77-23	25 to 35	635 to 1270	
		Total	7741	Total	7741					
2.9.7	Vaippar :Rises on the Eastern slopes of the Varushandu Hill ranges of Western ghat near Sivagiri in Thirunelveli Distt. in Tamil Nadu at an elevation of 900 m. Length 125 Km.	Tamil Nadu	5069							-
		Total	5069							
2.9.8	Thambraparani Rises on Eastern slopes of Westernghat near Alwarkurichi village in Thirunelveli Distt. of Tamil Nadu at an elevation of 1400 m. Length 130 Km.	Tamil Nadu	5482	Chittar Manimuthar		8 - 46	77 - 15			
		Total	5482							
2.9.9	Varahanadi originated from northern parts of Pakkammalai Hills at an elevation of 5660m past of Gingee Taluk. Length 78.5 Km.	Tamil Nadu	2564			11 - 59	79 - 40			

Source : Water Year Book (June 2014 - May 2015) East Flowing Rivers Basin Vol.I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics		Major Projects		
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.9	Basin: East Flowing Rivers from Pennar to Kanyakumari									
2.9.6	Vaigai	GDQ= 1 GDSQ = 2 Total =3			15 Parmakudi (6796)		Vaigai Reservoir	194.78		
2.9.7	Vaippar	GDQ=1			0 Irukkankudi (3721)			-	-	-
2.9.8	Thambraparani	GDQ = 1 GDSQ=1 Total =2			625 Murappandu (4380)			-	-	-
2.9.9	Varahanadi	GDQ=1			0 Kumarapalayam (2208)	Granulite Magnetitequartzite Charnockite				

Source : Water Year Book (June 2014 - May 2015) East Flowing Rivers Basin Vol.I, Stream Flow & Suspended Sediment Data.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.10	Basin: Narmada									
2.10	Narmada Originates from Amarkantak of Shehdol Distt. Of Madhya Pradesh at an elevation of 1057m Length 1312 Km	Madhya Pradesh Maharashtra Gujarat Chhattisgarh	85172 1538 11399 687	Burhner Hiran Tawa Chhota Tawa Kundi Orsang Banjar Others	4228 4795 6338 5055 3973 3946 3282 67179	21° 20' to 23° 45'	72° 32' to 81° 45'	7.5 to 42.0	674 to 1623	Lower Zone 12.0 to 28.0 Middle Zone 4.0 to 7.0 Upper Zone 1.0 to 3.0
		Total	98796	Total	98796					
2.11	Basin: Tapi									
2.11	Tapi Rises from Near Multai in Betul Distt. of Madhya Pradesh at an elevation of 752 m. Length 724 Km.	Madhya Pradesh Maharashtra Gujarat	9804 51504 3837	Tapi(Main) Gomai Arunavati Buray Panjhra Bori Aner Girma Waghur Purna	22522 1148 935 1419 3257 2580 1702 10061 2592 18929	20° 05' to 22° 03'	72° 38' to 78° 17'	Max: 21.3° C to 45.2° C Min: 32.9° C to 8.7° C	863.5	
		Total	65145	Total	65145					

Source : Water Year Book of Tapi & Narmada Basin for year 2014-2015

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics		Major Projects		
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.10	Basin: Narmada									
2.10	Narmada	G = 8 GDQ = 7 GDSQ = 11 RF = 2 Total =28	Bauxite, Clay, Coal, Dolomite, Graphite, Iron Ore, Manganese Talc & Lime Stone		49129 (2013-2014) Garudeshwar (87892 Sq. Km.)	Shallow Black, Medium Black, Medium Deep Black, Mixed Red & Black Sandy Laterite	Karjan Sardar Sarover Jobat Man Upper Beda Maheshwar Indira Sagar Sukta Kolar Tawa Barna Bargi Matiyari	630.00 - 77.84 145.03 91.82 - 12220.00 89.50 270.00 2310.00 539.00 3920.00 56.80	- - 70.04 126.87 76.24 - 9750.00 78.05 265.00 2050.50 455.78 3180.00 51.12	- 7475.5 47.77 114.73 7.58 - 354.11 76.21 209.29 1673.49 372.79 335.80 17.40
2.11	Basin: Tapi									
2.11	Tapi	G = 12 GD = 1 GDS = 1 GDQ = 1 GDSQ = 3 RF = 1 Total= 19	Coal	Paper Mills Sugar Mills Cotton Spinning Mills Dal Mills Oil Mills Wood Cutting Mills	Burhanpur: 5,192 MCM 8,487 Sq. Km. Sarangkheda: 3,852 MCM 58,400 Sq. Km.	Shallow Black Medium Black Black Cotton Light Brown to Redish Brown Dark Yellow & Redish	Hathnur Dam Girna Dam Ukai Dam	388.00 608.45 8,510	255.00 523.55 7,092	

Source : Water Year Book of Tapi & Narmada Basin for year 2014-2015

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.12	Basin: West Flowing Rivers from Tapi to Tadri									
2.12.1	Ulhas - Rises from Sahyadri Hills in Raigad Distt. of Maharashtra at an elevation of 600 m. Length 122 Km.	Maharashtra	4637	Pej Bhalla Barvi Salpe Bhivapuri		18-44 to 19-42	72-45 to 73-48	12.4 to 38.9	2943	
	Total		4637							
2.12.2	Kal - Rises from Sahyadri Hills in Raigad Distt. of Maharashtra at an elevation of 652 m. Length 40 Km.	Maharashtra	670			18-05 to 18-25	73-10 to 73-13		2795	
	Total		670							
2.12.3	Kajvi - Rises in the Vishal Ghat region of Sahayadri Hills.	Maharashtra	315							
	Total		315							
2.12.4	Gad - Rises from Sahayadri Hills, ranges in Sindhudurg Distt.of Maharashtra at an elevation of 600 m. Length 66 Km.	Maharashtra	890			16-0 to 16-20	73-30 to 74-00		2600	
	Total		890							
2.12.5	Mandovi - Rises in the Jamboti Ghat in Karnataka at an elevation of 600 m Length 62 Km.	Goa	1550	Sarang Mahainada Udel		15-15 to 15-40	73-15 to 73-45	9.3 to 42.6	3484	
	Total		1550							
2.12.6	Aghanashini - Rises from Western Ghat of Karnataka at an elevation 676 m. Length 117 Km.	Karnataka	1350					20 to 32.7	2028 to 5465	
	Total		1350							

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics		Major Projects		
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.12	Basin: West Flowing Rivers from Tapi to Tadri									
2.12.1	Ulhas	G = 8 GD = 7 GDQ = 4 GDSQ = 3 RF = 4 Total = 26			2754 Badlapur (785)					
2.12.2	Kal				751 Mangaon (259)		Kal			
2.12.3	Kajvi				844 Anjanari (315)	Sandy Mixed With Gravel				
2.12.4	Gad				1432 Belne Bridge (605)					
2.12.5	Mandovi				3862 Ganjim (880)		Anjunem			
2.12.6	Aghanashini				3306 Santeguli (1090)					

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.13	Basin: West Flowing Rivers from Tadri to Kanyakumari									
2.13.1	Haladi (Varahi) - Rises near Someswara in the reserved forest of Karnataka at an elevation of 870 m. Length 70 Km.	Karnataka	761					21.7 to 32.4	5516	
	Total		761							
2.13.2	Swarna (Yennehole) - Rises from Western Ghat of Dakshin Kannada Distt. Length 61 Km.	Karnataka	165					21.7 to 32.4	4436	
	Total		165							
2.13.3	Netravati - Rises between Kudermukh of Ballalayan Durga in Dakshina Kannada Distt. of Karnataka at an elevation of 1000 m. Length 103 Km.	Karnataka	3657	Kumaradhara			75-20	16 to 42	2002 to 5277	-
	Total		3657							
2.13.4	Payaswani - Originate from Pattighat reserved forest in Coorg Distt. of Karnataka at an elevation of 1350 m. Length 105 Km.	Karnataka Kerala	581 957				-	-	-	-
	Total		1538							
2.13.5	Valapatanam - Rises from South of Ammatti Village in the Distt. of Coorg of Karnataka at an elevation of 900 m. Length 101 Km.	Karnataka Kerala	546 1321			12-13	75-52	22 to 32.9	2369 to 4268	-
	Total		1867							

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.13	Basin: West Flowing Rivers from Tadri to Kanyakumari									
2.13.1	Haladi	GDQ=1			2134 Haladi (583)					
2.13.2	Swarna	GDQ=1			1518 Yennehole (327)		Proposed Dam Site	370.95	108.65	
2.13.3	Netravathi	GDSQ=1			10868 Bantwal (3184)			-	-	-
2.13.4	Payaswani	GDSQ=1			2619 Erinjipuzha (957)			-	-	-
2.13.5	Valapatanam	GDSQ=1			4655 Perumannu (1070)		Kattampally	-	-	-

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq. Km)	Latitude (a°-b ')	Longitute (x°-y ')	Temprature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.13	Basin: West Flowing Rivers from Tadri to Kanyakumari									
2.13.6	Chaliyar (Beypore) Rises from Elambalari Hills in Kerala State at an elevation of 2067 m. Length 169 Km.	Kerala Tamil Nadu	2545 388	Cherupuzha Vadapurampuzha Iringipuzha Chaliyarpuzha		-	-	25.8 to 29.4	1289 to 5042	-
		Total	2933							
2.13.7	Kadalundi(Karpuzha/Oruvanpurampuzha) Rises from East of Karuvarukkundu Village in Calicut Distt. in Kerala at an elevation of 900 m. Length 130 Km.	Kerala	1112			11-18	76-15	25.8 to 29.4	1289 to 5042	-
		Total	1112							
2.13.8	Bharathapuzha (Ponnani/Aliyar/Kannadipuzha) Rises in the Eastern slopes of Anamalai Hills of Western Ghat in Tamil Nadu at an elevation of 2250 m. Length 209 Km.	Tamil Nadu Kerala	1786 4400	Palar Kalpathipuzha Gayathripuzha Pulanthode		10-26 to 11-13	75-53 to 77-13	22.2 to 37.4	2000 to 3000	-
		Total	6186							
2.13.9	Chalakudi Rises from Anamalai Hills of Western Ghat Length 130 Km.	Kerala Tamil Nadu	1404 300			-	-	25.9 to 28.7	1494 to 4588	-
		Total	1704							
2.13.10	Periyar - Rises at the forest Sivagiri Peak 80 Km. South of Devikulam at an elevation of 2438 m. Length 244 Km.	Kerala Tamil Nadu	5284 114	Edamala				25.9 to 28.7	Good Rainfall Max.8656	-
		Total	5398							

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.13	Basin: West Flowing Rivers from Tadri to Kanyakumari									
2.13.6	Chaliyar (Beyepore)	GDSQ= 1			4616 Kuniyil (1876)			-	-	-
2.13.7	Kadalundi	GDSQ=1			1854 Karathodu (750)			-	-	-
2.13.8	Bharathapuzha	GDSQ= 3 GDQ = 2 Total =5			6340 Kumbidi (5755)		Malampuzha Res. Tirumurthi Aliayar	228.40	226.96	-
2.13.9	Chalakudi	GDSQ=1			2155 Arangaly (1342)		Chalakudi River Diversion Scheme Sholayar H.E.S. Peringilkuthu Left Bank Scheme	443.50	299.50	-
2.13.10	Periyar	GDSQ=2 GDQ= 1 Total = 3			8033 Neeleshwaram (4234)		Periyarvalley Project Edamalayar Idukky Hydel Project	453.50 1089.80 1996.30	299.35 1017.80 1489.50	- 1824.00 2027.90

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitute (x°-y')	Temprature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.13	Basin: West Flowing Rivers from Tadri to Kanyakumari									
2.13.11	Muvattupuzha - Rises from the East of Erattupetta village in Distt. Of Kottayam in Kerala State at an evelation of 1200 m Length 121 Km.	Kerala	1554	Thodupuzha Aar Kaliyar Kothmangalam Aar		9-43	76-53	25.9 to 28.7	2779 to 4526	-
	Total		1554							
2.13.12	Meenachil River in the Distt. Kottayam of Originate at East of Errattupata Kerala State at an evalation 900 m. Length 78 Km.	Kerala	1272	Kadapuzha Aar Karipadthode Trikovil Aar Poonzan Aar		9-40	76-52	26.2 to 29.4	2420 to 4686	-
	Total		1272							
2.13.13	Pamba - Rises in the Peermedu Plateau at an elevation 1670 m. Length 176 Km.	Kerala	2235	Kaki Aar		-	-	22.6 to 32.7	2276 to 4275	-
	Total		2235							
2.13.14	Achankovil - Rises from South of the Devermalai in the Quillon Distt. of Kerala State at an elevation of 1500 m.	Kerala	1484			09-10	77-15	26.1 to 29.1	2520	-
	Total		1484							
2.13.15	Kallada - Rises in Papanasam range South of Kulathupuzha in Quillon Distt. of Kerala State at an elevation of 900 m.Length 121 Km.	Kerala	1699			-	-	26.1 to 29.1	2225 to 4038	-
	Total		1699							
2.13.16	Vamanapuram - Originates in the Chemunji Motai at an elevation of 1860 m. Length 88 Km.	Kerala	687			-	-	26.2 to 28.8	1836 to 4651	-
	Total		687							

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

(Contd.)

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Name	Major Projects		
								Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.13	Basin: West Flowing Rivers from Tadri to Kanyakumari									
2.13.11	Muvattupuzha	GDSQ=1			5441 Ramamangalam (1208)			-	-	-
2.13.12	Meenachil River	GDSQ=1			2255 Kidangoor (615)			-	-	-
2.13.13	Pamba	GDSQ=2			4039 Malakkara (1713)		Pamba Hydrel Project	487.30	471.68	1046.80
2.13.14	Achankovil	GDSQ=1			1269 Thumpamon (810)			-	-	-
2.13.15	Kallada	GDSQ=1			1692 Pattazhy (1210)		Kalada Irrigation Project	524	507	-
2.13.16	Vamanapuram	GDSQ=1			579 Ayilm (540)			-	-	-
2.13.17	Other rivers viz. Sita, Gurpur etc.	GDQ = 5								

Source : Water Year Book (June 2014 - May 2015) West Flowing Rivers Basin Vol.- I, Stream Flow & Suspended Sediment Data.

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')	Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.14	Basin: Mahi									
2.14	Mahi Rises from Near village Sardarpur in Dhar Distt. of Madhya Pradesh at an elevation of 500 m. Length 583 Km.	Madhya Pradesh Rajasthan Gujarat Total	6695 16453 11694 34,842	Som Anas Panam Others Total	8707 5604 2470 18061 34842	21° 46' to 24° 30' N	72° 21' to 75° 19' E	min.tem varies from 4 to 14 max.tem varies from 44 to 46	748.1	3.5

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.14	Basin: Mahi									
2.14	Mahi Origin-Northern slopes of Vindhayas Altitude-500 m Length-583 km	G= 6 GD= 2 GDQ = 2 GDSQ= 3 Total = 13	Phyllites, gneisses Quartzite & Granite	Engg., Handicraft, Stonework, Cement, Chemical, Liquier, Sugar, Tex and Wools etc.	4509 till 2013-14 khanpur (32,510 Sq km CA	Deep and medium black alluvial soil, red-yellow	Mahi Bajaj Sagar Dam kadana Dam Panam Dam Jakhm Machhan nalla Wanakbori Weir Jaisamand Hadaf kabutary Bhadar Umaria Edalwada Somkamla Amba Dam	2180 1542 735.8 141.9 37.91 41.884 414.6 32.26 9.58 46.72 13.53 11.53 126.06	1712 1203 679.2 131.6 29.16 36.224 296.1 25.02 8.07 40.06 11.67 10.5 125.83	information not available

Source : Water Year Book of Mahi, Sabarmati and Other West Flowing Rivers. Basin for year 2014-15

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq. Km)	Latitude (a°-b')	Longitute (x°-y')	Temprature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.15	Basin: Sabarmati									
2.15	Sabarmati Originates in Aravali Hills in Rajasthan at an elevation of 762 m. Length 371 Km.	Rajasthan Gujarat	4124 17550	Sei Wakal Harnav Hathamati Watrak	946 1625 972 1526 8638	22-15 25-00	71-00 73-45	Min temp varies from 3.5 to 18 Max.Temp varies from 48 to 46	775.7	No observation by CWC
		Total	21,674							

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.15	Basin: Sabarmati									
2.15	Sabarmati	G=7 GD= 4 GDQ= 1 GDSQ= 1 Total = 13	Phyllites, gneisses Quartzite & Granite	Engg., Handicraft, Stonework, Cement, Chemical, Liquier, Sugar, Tex and Wools etc.	2626 till (2013-14) Voutha (19636 Sq. Km. CA)	Deep and alluvial soil, red-yellow	Sei Dam Dharoi Dam Hanav-II Guhai Hathamati Meshwo Mazam Watrak Dam Waidy Raska Weir Moti Fatewadi Vasna Barrage	31.34 907.88 21.67 62.34 161 82 43.86 176.9 13.6	24.16 731.99 19.97 57.04 153 77 36.58 154.3 12.3	information not available

Source : Water Year Book of Mahi, Sabarmati and Other West Flowing Rivers. Basin for year 2014-15

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b ')	Longitude (x°-y ')	Temperature Variation (°C)	Average Annual rainfall (MM)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.16	Basin: West flowing rivers of Kutch and Saurashtra including Luni									
2.16.1	Luni Western Slope of Aravali Hills near Ajmer in Rajasthan at an elevation of 772 m. Length 511 Km.	Rajasthan	32879	Jojari(Mithri)	1060	24-11 to	70-37 to	Min temp varies from	295.2	No observation by CWC
				Lolari	1611	26-43	74-39	5 to 7.5		
				Guhiya &	4126			Max.Temp varies from		
				Sukri (Hemavas)	3016			46.4 to 48		
				Bandi (Hemavas)	3280					
				Sukari	2637					
				Mithri	2701					
				Jawai	2671					
				Khari Bandhi	1161					
		Total	32,879	Sugi	1370					
2.16.2	Banas Rises from village Pindwara of Sirohi Distt. in Rajasthan at an elevation of 372.51 m. Length 266 Km.	Rajasthan	3269	Sipu	1420	23-30 to	71-15 to	Min temp varies from	728.4	No observation by CWC
		Gujarat	5405	Sukli	438	24-55	73-15	5 to 8		
				Batria	218			Max.Temp varies from		
				Sewaram	202			40 to 44.5		
				Suket	79					
				Balaram	345					
		Total	8,674	Khari	1391					
2.16.3	Shetrunji Originates at Chchai Hills in Gir Forest of Junagarh Distt.of Gujarat at an elevation of 380 m. Length 182 Km.	Gujarat	5514	Satali	651	21-00 to	70-50 to	Min temp varies from	662	No observation by CWC
				Theli	484	21-47	72-10	12 to 31		
				Safara	226			Max.Temp varies from		
				Shel	303			19 to 42		
				Gagaraia	754					
				Kharai	665					
				Kharo	261					
				Rajwal	321					
		Total	5514	Talaji	134					
2.16.4	Bhadar Rises from Near Vaddi village of Rajkot Distt. of Gujarat at an elevation of 261 m. Length 198 Km.	Gujarat	7094	Vasavadi	583	21-25 to	69-45 to	Min temp varies from	580.2	No observation by CWC
				Gondali	513.85	22-10	71-20	8 to 10		
				Surwa	273.6			Max.Temp varies from		
				Galolio	198.25			26 to 44		
				Chappervadi	455.4					
				Phopal	590.5					
				Utawali	103.6					
				Moj	105.15					
				Venu	953.12					
		Total	7094	Total	7094					
2.16.5	Machhu Rises from near village Khokhara in Surendra Nagar Distt. of Gujarat at an elevation of 220 m. Length 142 Km.	Gujarat	2515	Beti	235.69	22-10 to	70-40 to	Min temp varies from	253	No observation by CWC
				Jampur	119.14	23-10	71-15	4 to 11		
				Bania	113.96			Max.Temp varies from		
				Machhori	140.62			24 to 41		
				Asoi	197.84					
		Total	2515	Maha	507.64					
2.16.6	Rupen Originate -Taranga hills near Kheralu Taluka of Mehasana District Altitude-180m Length-156km	Gujarat	2500	Khari	180	23-25 to	71-30 to	Min temp varies from	597	No observation by CWC
				Pushpavati	446	24-00	72-46	8 to 16		
				Khari (Right)	170			Max.Temp varies from		
		Total	2500	Total	2500			18 to 39		

Table 2 : Salient Features of Different River Basins during 2014-15

Sl. No.	Basin Name	Number of Hydrological Observation Site	Principal Minerals	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catchment Area)	Soil Characteristics		Major Projects		
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2.16	Basin: West flowing rivers of Kutch and Saurashtra including Luni									
2.16.1	Luni Origin- Aravalli Hills Altitude- 772m Length -511km	GD= 2	details not available	details not available	239.24 till 2013-14 Gandhav (32010 sq.km)	Saline and desart,red-yellow	Jawai Dam Jaswant Sagar Dam Hemawas Sardar Samand Banki bund	198 52.8 62.5 88 48.6	184 52.6 62.5 88 34.5	information not available
2.16.2	Banas Originates - Aravalli hills Altitude-372.5m Length-266lm	G = 4 GD = 1 GDQ = 2 GDSQ = 1 Total = 8	details not available	details not available	321 till 2013-14 Kamalpuri (6960 sq.km)	Alluvial saline, red-yellow	Swaroopganj Dam Dantiwada Dam Sipu Dam	39.05 464 177.8	- 444 156	information not available
2.16.3	Shetrunji Originates - Chchhai hills in Gir forest Altitude - 380m Length- 182 km	GDSQ = 1	details not available	details not available	275 till 2013-14 lowara (3953 sq. km.)	Deep and mediumblack ,alluvial	Shetrunji Irrigation Scheme	350	309	information not available
2.16.4	Bhader Originate-Vaddi about 26km N-W of Jasdan in Rajkot District Altitude- 261 m Length-198km	GDSQ = 1	details not available	details not available	456 till 2013-14 Ganod 6266 sq.km	Deep and mediumblack ,alluvial	Bhader Irrigation Scheme	238	221	information not available
2.16.5	Machhu Originate-Hills of Jasdan near village Khokhara in Chotila Taluka of Surendranagar Altitude-220m Length-142 km	GD = 1	details not available	details not available	182 till 2013-14 Gungan 2137 sq.km	Red-yellow ,alluvial	Machhu - 1 Machhu - 2	70.8 100.55	- -	information not available
2.16.6	Rupen Originate -Taranga hills near Kheralu Tq of Mehasana District Altitude-180m Length-156km	GD = 1	Not available	details not available	72 till 2013-14 Sapawada 2125 sq.km	Saline, alluvial	-	-	-	information not available

Source : Water Year Book of Mahi, Sabarmati and Other West Flowing Rivers. Basin for year 2014-15

Table 3 : Number of Hydrological Observation Sites under CWC by type of sites in Region-III Basins during 2014-15

Sl. No.	Basin Name	Number and Type of Sites							Total no. of Sites
		Guage (G), Discharge(D), Water Quality(Q), Sediment(S), Rainfall(RF)							
(1)	(2)	(3)							(4)
		G	GD	GQ	GDS	GDQ	GDSQ	RF	
1	Mahanadi	20	4	1		1	16	6	48
2	Suberanrekha	5	2	-	-	1	4	-	12
3	Brahmani & Baitarani	5	1	1	-	-	7	1	15
4	Godavari	26	31	-	-	1	17	1	76
5	Krishna	15	12	1	1	10	13	-	52
6	Cauvery	-	-	-	-	19	15	-	34
7	Pennar	-	-	-	-	6	2	-	8
8	East Flowing River from Mahanadi to Pennar	7	2	-	-	-	4	-	13
9	East Flowing River from Pennar to Kanya Kumari		-	-	-	12	5	-	17
10	Narmada	8	-	-	-	7	11	2	28
11	Tapi	12	1	-	1	1	3	1	19
12	West Flowing River from Tapi to Tadri	8	7	-	-	4	3	4	26
13	West Flowing River from Tadri to Kanyakumari	-	-	-	-	10	18	-	28
14	Mahi	6	2	-	-	2	3	-	13
15	Sabarmati	7	4	-	-	1	1	-	13
16	West Flowing Rivers from Kutch & Saurashtra including Luni	4	5	-	-	2	3	1	15

Source : Water Year Books of Differernt River Basins for the year 2014-15

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

I Basin : Mahanadi											
Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Baronda	3225	20°54'45"	81°53'10"	283.00	289.33	18/09/1980	2014 - 2015	06/12/1977	29/06/1980	02/06/1980
2	Rajim	8760	20°58'00"	81°52'30"	275.00	282.68	30/08/1994	2014 - 2015	-	04/12/1972	01/09/1972
3	Seorinarayan	48050	21°43'00"	82°35'30"	209.50	224.31	30/08/2003	2014 - 2015	09/12/1985	11/02/2013	-
4	Basantpur	57780	21°43'18"	82°47'27"	246.00	219.32	20/09/1980	2014 - 2015	11/05/1971	01/09/1972	01/09/1972
5	Gunderdehi	-	-	-	-	-	-	2014 - 2015	-	-	-
6	Kotni	6990	21°13'02"	81°14'19"	268.00	279.61	12/07/1994	2014 - 2015	30/09/1978	-	-
7	Pathardih	2511	21°20'28"	81°35'48"	271.00	279.63	01/07/2007	2014 - 2015	05/06/1989	-	01/06/1995
8	Simga	30761	21°37'33"	81°41'36"	244.00	257.59	13/07/1994	2014 - 2015	-	30/12/1972	01/09/1972
9	Andhiarkhore	2210	21°47'00"	81°36'30"	252.00	258.93	09/08/1979	2014 - 2015	-	12/07/1980	01/06/1980
10	Ghatora	3035	22°02'04"	82°13'34"	246.00	253.50	21/07/1994	2014 - 2015	17/09/1979	01/11/2000	01/11/1991
11	Jondhra	29645	21°43'00"	82°20'34"	219.00	230.57	14/07/1994	2014 - 2015	21/07/1979	11/10/1980	02/06/1980
12	Rampur	2920	21°39'57"	82°31'30"	219.00	229.66	29/08/2003	2014 - 2015	-	05/07/1976	15/01/1972
13	Manendragarh	1100	23°12'10"	82°12' 54"	411.00	420.44	12/07/1990	2014 - 2015	21/06/1989	09/07/1993	01/10/1992
14	Bamnidhi	9730	21°53'55"	82°42'29"	223.00	228.88	22/08/1975	2014 - 2015	18/02/1971	01/01/1973	01/09/1972
15	Kurubhata	4625	21°59'15"	83°12'15"	215.00	220.28	18/07/1995	2014 - 2015	01/04/1978	22/07/1980	01/07/1980
16	Sundergarh	5870	22°06'55"	84°00'40"	214.00	222.60	23/06/1996	2014 - 2015	30/12/1977	21/07/1980	02/06/1980
17	Salebhata	4650	20°59'00"	83°32'22"	130.00	139.58	29/08/2003	2014 - 2015	-	01/05/1973	15/09/1972
18	Kesinga	11960	20°11'51"	83°13'30"	166.00	178.50	04/07/2006	2014 - 2015	07/11/1978	22/09/2006	01/06/2001
19	Kantamal	19600	20°39'00"	83°43'55"	118.00	132.70	19/09/2008	2014 - 2015	26/08/1971	22/07/1976	01/01/1972
20	Tikarapara	124450	20°38'00"	84°37'08"	50.00	74.57	10/09/2011	2014 - 2015	28/05/1972	01/06/1973	01/12/1972

Source : Water Year Book (June 2014 to May 2015) Mahanadi Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

II Basin : Subernarekha											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Muri	1330	22°48'56"	86°12'47"	231.00	237.50	24/09/2006	2014 - 2015	01/11/1989	-	01/05/1991
2	Adityapur	6309	22°47'29"	86°10'06"	125.00	137.56	20/08/1975	2014 - 2015	22/11/1971	06/02/1975	01/01/1976
3	Jamshedpur	12649	22°47'00"	86°12'00"	111.00	126.26	03/09/1973	2014 - 2015	01/02/1972	27/11/1972	01/09/1972
4	Ghatsila	14176	22°34'49"	86°20'08"	72.00	85.05	17/08/1974	2014 - 2015	16/03/1971	30/12/1972	01/09/1972
5	Fekoghat	700	22°18'28"	86°55'11"	41.48	50.00	06/07/2007	2014 - 2015	18/06/1988	-	-
6	Rajghat	18260	21°46'04"	87°09'51"	3.00	10.54	12/08/2016	2014 - 2015	01/03/2013	-	-
7	Govindpur	4495	21°32'52"	86°55'14"	0.00	8.90	31/10/1999	2014 - 2015	07/03/1992	21/03/2003	01/05/2003

Source: Water Year Book (June 2014 to May 2015) Baitarani, Subernarekha & Burhabalang Basin.

III Basin : Brahmani & Baitarani											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Tilga	3160	22°20'00"	84°30'00"	372.000	378.625	28/08/1987	2014 - 2015	15/06/1979	21/07/1980	01/06/1980
2	Jaraikela	9160	22°19'08"	85°06'19"	185.000	194.010	06/08/1997	2014 - 2015	01/08/1972	01/06/1975	01/09/1975
3	Panposh	19448	22°16'19"	84°51'07"	170.500	181.440	24/09/2011	2014 - 2015	21/06/1996	01/08/1996	01/11/1990
4	Gomlai	21950	21°50'16"	84°56'33"	135.000	147.270	20/08/2007	2014 - 2015	21/01/1979	17/07/1980	17/07/1980
5	Jenapur	33955	20°53'23"	86°00'51"	13.000	23.730	26/09/2011	2014 - 2015	20/07/1979	09/07/1980	01/03/1980
6	Altuma	830	20°55'48"	85°31'20"	44.000	50.150	21/07/2009	2014 - 2015	25/07/1990	-	-
7	Anandpur	8570	21°12'34"	86°07'23"	28.00	68.14	18/06/2008	2014 - 2015	07/03/1972	01/06/1972	01/09/1972
8	Champua	1710	22°03'57"	85°40'56"	367.00	378.95	23/09/2011	2014 - 2015	20/07/1990	09/08/2001	08/09/2001

Source: Water Year Book (June 2014 to May 2015) Brahmani Basin

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

IV Basin : Godavari											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Polavaram	307800	17°15'07"	81°38'53"	10.897	28.017	16/08/1986	2014 - 2015	01/01/1966	25/10/1966	25/10/1966
2	Bhadrachalam	280505	17°40'05"	80°52'47"	32.610	50.960	03/08/2013	2014 - 2015	11/07/2007	-	03/10/2006
3	Konta	19550	17°47'56"	81°23'18"	30.430	49.910	17/08/1986	2014 - 2015	28/10/1965	01/01/1968	05/05/1968
4	Potteru (Seasonal)	1120	18°11'23"	81°47'52"	120.500	131.990	04/08/2006	2014 - 2015	20/05/1997	-	-
5	Saradaput	3047	18°36'43"	82°08'36"	225.465	239.530	04/08/2006	2014 - 2015	05/09/1970	-	-
6	Sangam	1565	17°35'50"	80°49'40"	53.000	58.250	21/09/2005	2014 - 2015	24/08/1996	-	-
7	Perur	268200	18°35'14"	80°26'10"	83.000	87.420	15/08/1986	2014 - 2015	17/09/1965	24/02/1968	24/10/1968
8	Pathagudem	40000	18°49'00"	80°21'00"	85.750	103.500	05/08/2006	2014 - 2015	20/07/1964	21/07/1965	01/01/1972
9	Tumnar	1700	19°00'30"	81°14'20"	315.007	325.977	14/06/2004	2014 - 2015	09/12/1991	-	-
10	Chindnar	17270	19°05'00"	81°18'00"	327.150	340.100	05/07/2006	2014 - 2015	07/12/1971	-	-
11	Cherribeda	890	19°38'23"	81°29'07"	564.400	573.900	04/07/2006	2014 - 2015	13/11/1996	-	-
12	Ambabal	1968	19°17'00"	81°47'20"	534.000	542.450	05/07/2006	2014 - 2015	30/10/1993	-	-
13	Sonarpal	1523	19°16'00"	81°52'00"	534.356	542.570	04/07/2006	2014 - 2015	05/12/1991	-	-
14	Jagdapur	7380	19°06'30"	82°01'30"	544.595	544.551	15/08/1986	2014 - 2015	21/09/1965	21/09/1965	01/12/1979
15	Kosagumda	1635	19°16'37"	82°14'00"	547.000	556.150	20/08/2001	2014 - 2015	13/11/1996	-	-
16	Murthahandi	-	19°03'00"	82°17'00"	533.600	545.090	06/08/2010	2014 - 2015	01/12/1988	-	-
17	Nowrangpur	3545	19°12'00"	82°31'00"	550.716	560.636	29/07/1969	2014 - 2015	20/06/1971	21/06/1971	01/01/1972
18	Tekra	108780	18°58'42"	79°56'49"	95.090	114.600	15/08/1986	2014 - 2015	15/07/1964	01/07/1965	15/06/1966
19	Bhatpalli	3100	19°19'50"	79°30'14"	156.000	168.500	02/10/1988	2014 - 2015	01/10/1986	07/10/1988	04/01/1988
20	Sirpur (Sakmur)	47500	19°33'41"	79°36'48"	148.500	161.950	08/08/2006	2014 - 2015	01/02/1968	-	-
21	Bamni	46020	19°48'53"	79°22'46"	157.970	176.320	15/08/1986	2014 - 2015	16/10/1965	13/12/1965	03/06/1966

Contd.,

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

IV Basin : Godavari											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
22	P.G.Bridge	18441	19°49'03"	78°34'40"	198.630	217.920	07/08/2006	2014 - 2015	21/07/1965	19/10/1965	31/05/1966
23	Mangrul	2500	20°11'19"	77°59'12"	279.375	290.375	26/08/2002	2014 - 2015	09/11/1992	-	-
24	Kanergaon	3515	19°57'40"	77°08'53"	465.015	477.345	07/08/2006	2014 - 2015	20/07/1992	-	-
25	Nandgaon	4580	20°32'00"	78°49'33"	198.000	212.550	13/07/1994	2014 - 2015	21/07/1986	13/07/1988	01/01/1988
26	Hivra	10240	20°32'52"	78°19'30"	230.000	246.310	07/09/1994	2014 - 2015	11/08/1987	26/06/1990	16/12/1987
27	Ashti	50990	19°41'12"	79°47'13"	141.420	155.100	13/07/1994	2014 - 2015	14/07/1965	14/03/1966	01/06/1966
28	Rajoli	1900	20°11'37"	79°39'59"	229.000	239.615	14/08/1986	2014 - 2015	25/06/1986	-	-
29	Wairagarh	2600	20°25'19"	80°05'30"	208.705	215.905	07/08/2007	2014 - 2015	07/08/1992	-	01/10/2014
30	Salebardi	1800	20°54'44"	79°55'40"	224.300	233.520	15/09/2005	2014 - 2015	21/06/1986	-	-
31	Satrapur	11100	21°13'00"	79°13'59"	264.300	277.610	06/09/1994	2014 - 2015	30/05/1986	01/08/1988	09/12/1987
32	RamaKona	2500	21°43'12"	78°49'27"	338.000	349.500	30/07/1991	2014 - 2015	21/11/1986	12/11/2014	01/06/2014
33	Rajegaon	5380	21°37'32"	80°15'14"	272.000	284.200	15/09/2005	2014 - 2015	26/07/1986	27/08/2014	01/02/2012
34	Kumhari	8070	21°53'03"	80°10'36"	289.000	304.335	18/08/2002	2014 - 2015	01/12/1986	01/09/2014	01/02/2012
35	Keolari	2970	22°22'50"	79°54'00"	425.000	440.500	21/07/1994	2014 - 2015	29/06/1987	-	01/06/2014
36	Somanpally (Seasonal)	12691	18°37'12"	79°48'12"	121.444	127.344	24/07/1989	2014 - 2015	17/03/1967	-	-
37	Mancherial	102900	18°50'08"	79°27'00"	124.316	137.846	12/08/1983	2014 - 2015	03/07/1964	01/07/1965	01/12/1979
38	Gandlapet	1360	18°49'16"	78°26'17"	312.000	317.900	30/08/1990	2014 - 2015	10/09/1986	-	31/07/1988
39	Betmogrra	2105	18°42'18"	77°32'42"	347.500	356.200	16/10/2005	2014 - 2015	03/07/1997	-	15/07/1997
40	Degloor	1900	18°33'43"	77°34'56"	352.000	363.850	24/08/2000	2014 - 2015	17/07/1987	01/01/1994	15/09/1988
41	Saigaon	9960	18°04'33"	77°03'09"	542.723	554.443	17/08/1990	2014 - 2015	10/11/1967	19/07/1973	16/08/1973
42	Yelli	53630	19°02'00"	77°28'00"	334.300	354.200	07/08/2006	2014 - 2015	22/04/1978	01/06/1978	01/07/1978
43	Purna	15000	19°10'33"	77°02'00"	358.000	371.800	27/07/2005	2014 - 2015	02/09/1969	10/10/1972	01/11/1972
44	Zari	5550	19°23'43"	76°46'15"	373.000	385.710	27/07/2005	2014 - 2015	18/06/1987	-	01/08/1988
45	G.R.Bridge	33934	19°01'20"	76°43'45"	364.000	378.370	14/08/2006	2014 - 2015	19/06/1976	01/07/1976	01/07/1976
46	Dhalegaon	30840	19°13'13"	76°21'52"	386.575	399.855	13/08/2006	2014 - 2015	16/08/1964	11/07/1971	01/07/1972
47	Pachegaon	5800	19°32'07"	74°50'01"	475.000	481.580	26/08/1997	2014 - 2015	23/07/1983	-	-
48	Kiwaibalenga	910	19°38'30"	81°33'45"	562.000	571.790	06/08/2010	2014 - 2015	29/08/2005	-	-

Source : Water Year Book (June 2014 to May 2015) Godavari Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

V Basin : Krishna											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Vijayawada	251360	16°30'04"	80°37'30"	8.152	19.272	06/10/2009	2014 - 2015	24/03/1964	01/02/1965	01/01/1972
2	Keesara	9854	16°42'53"	80°19'13"	28.585	36.810	20/05/1969	2014 - 2015	26/06/1964	02/07/1965	01/01/1972
3	Madhira	1850	16°55'05"	80°21'32"	44.500	50.820	21/09/2005	2014 - 2015	07/06/1984	01/03/2014	01/06/1992
4	Paleru Bridge	2928	16°56'56"	80°02'57"	73.232	78.447	24/07/1989	2014 - 2015	01/07/1964	01/03/2014	01/06/1992
5	Wadenapally	235544	16°47'39"	80°04'23"	22.054	42.484	05/10/2009	2014 - 2015	10/12/1965	01/12/1966	01/01/1972
6	Dameracherla	11501	16°44'21"	79°40'11"	56.000	62.500	05/10/2009	2014 - 2015	27/07/1968	02/09/2013	01/01/1980
7	Halia	3100	16°47'25"	79°20'19"	129.000	133.507	22/09/1991	2014 - 2015	11/07/1984	-	01/06/1992
8	Doddipadu	2340	15°44'24"	77°59'89"	286.383	-	-	2014 - 2015	18/11/2014	-	-
9	Bawapuram	67180	15°52'57"	77°57'26"	271.825	281.585	02/10/2009	2014 - 2015	01/04/1964	01/06/1965	01/01/1972
10	Mantralayam	60630	15°56'43"	77°25'38"	308.340	318.770	02/10/2009	2014 - 2015	01/06/1972	26/07/1977	01/08/1977
11	T.Ramapuram	23500	15°39'40"	76°57'56"	349.368	355.948	02/10/2009	2014 - 2015	23/08/1964	-	01/01/1980
12	Kellodu	4320	13°45'00"	76°20'00"	647.750	650.250	13/11/2010	2014 - 2015	11/07/1990	-	01/07/1994
13	Hoovinahole	2585	13°58'57"	76°45'06"	93.500	95.820	06/09/2008	2014 - 2015	02/10/2001	-	01/06/2008
14	Marol	4901	14°56'20"	75°37'05"	508.831	517.459	18/11/1992	2014 - 2015	01/02/1966	16/09/1972	01/02/1973
15	Haralahalli	14582	14°49'50"	75°40'33"	507.436	518.109	18/11/1992	2014 - 2015	01/12/1966	01/11/1972	01/11/1972
16	Byladahalli	2300	14°26'00"	75°46'47"	530.400	537.430	17/11/1992	2014 - 2015	11/06/1985	10/12/1997	02/06/1986
17	Kuppelur	1850	14°30'00"	75°37'45"	533.400	541.840	08/08/2007	2014 - 2015	24/07/1990	23/07/2014	01/07/1994
18	Honnali	7075	14°14'18"	75°39'30"	533.900	546.400	16/07/1994	2014 - 2015	01/06/1980	15/09/1995	02/06/1986
19	Shimoga	2831	13°56'08"	75°34'41"	558.330	567.635	08/08/2012	2014 - 2015	22/01/1972	14/09/1972	01/01/1973
20	Holehonnur	2990	13°58'33"	75°41'06"	552.750	561.985	03/08/2013	2014 - 2015	01/07/2003	-	01/07/2003
21	Yadgir	69863	16°44'15"	77°07'31"	350.503	361.873	07/09/1969	2014 - 2015	11/11/1964	01/06/1965	01/01/1972
22	Malkhed	7650	17°12'12"	77°09'23"	390.000	398.270	15/10/1998	2014 - 2015	15/08/1990	08/09/1992	01/06/1992
23	Wadakbal	12092	17°32'03"	75°53'06"	418.883	428.538	29/09/1989	2014 - 2015	06/08/1964	01/06/1965	01/09/1972
24	Takli	33916	17°24'51"	75°50'52"	410.778	423.653	12/08/2006	2014 - 2015	01/06/1965	01/12/1966	01/09/1972
25	Narsingpur	22856	17°58'17"	75°08'21"	448.243	462.383	10/08/2006	2014 - 2015	22/02/1966	-	-
26	Sarati	7200	17°54'43"	75°00'27"	468.128	476.089	02/08/1976	2014 - 2015	01/06/1965	01/06/1966	01/09/1972
27	Phulgaon (Seasonal)	2205	18°40'01"	74°00'08"	537.000	545.000	30/08/2011	2014 - 2015	20/06/1992	-	02/08/1993
28	Huvinhedigi	55150	16°29'25"	76°55'23"	342.240	357.840	02/10/2009	2014 - 2015	01/02/1976	01/06/1976	01/02/1976
29	Talikota (Seasonal)	2486	16°29'01"	76°17'03"	496.000	501.215	26/08/2010	2014 - 2015	21/09/1995	-	-
30	Cholachagudda	9373	15°52'43"	75°43'16"	522.500	536.610	02/10/2009	2014 - 2015	01/06/1982	01/06/1982	01/06/1982
31	Gokak Falls (Seasonal)	2770	16°11'24"	74°47'29"	536.004	546.514	16/07/1994	2014 - 2015	14/07/1971	27/12/2014	01/09/2014
32	Sadalga (Seasonal)	2322	16°33'44"	74°31'42"	526.160	538.950	29/06/1983	2014 - 2015	24/06/1969	-	-
33	Terwad (Seasonal)	2425	16°40'31"	74°34'30"	520.000	540.390	06/08/2005	2014 - 2015	22/08/1979	-	-
34	Kurundwad	15190	16°41'01"	74°36'11"	519.455	539.750	06/08/2005	2014 - 2015	26/06/1972	06/08/2003	01/07/2003
35	Arjunwad (Seasonal)	12660	16°46'51"	74°37'59"	523.225	543.680	05/08/2005	2014 - 2015	12/01/1969	26/12/2014	01/09/2014
36	Samdoli (Seasonal)	1948	16°51'18"	74°29'50"	529.594	546.324	05/08/2005	2014 - 2015	01/12/1964	26/12/2014	01/09/2014
37	Karad	5462	17°17'40"	74°11'25"	549.962	566.075	30/07/2006	2014 - 2015	21/06/1965	22/06/1965	01/09/1972
38	Warunji	1890	17°16'20"	74°09'54"	550.937	566.937	30/07/2006	2014 - 2015	01/01/1966	01/06/1974	01/06/1974

Source : Water Year Book (June 2014 to May 2015) Krishna Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

VI Basin : Cauvery											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Gopurajapuram	-	10°51'05"	79°48'00"	13.000	3.240	08/11/2005	2014 - 2015	01/02/1999	-	01/10/2005
2	Annavasal	-	10°58'30"	79°45'14"	4.250	5.985	24/11/1999	2014 - 2015	01/02/1999	-	01/09/2005
3	Nallathur	-	11°00'08"	79°45'01"	0.000	5.665	28/11/2008	2014 - 2015	01/06/2006	-	01/09/2008
4	Menangudi	-	10°56'56"	79°42'14"	4.280	7.940	10/11/1997	2014 - 2015	21/08/1996	-	01/09/2005
5	Porakudi	-	10°54'14"	79°42'26"	3.000	7.200	28/11/2008	2014 - 2015	01/02/1999	-	01/09/2005
6	Peralam	-	10°57'59"	79°39'41"	6.000	9.835	27/11/2008	2014 - 2015	01/02/1999	-	01/09/2005
7	Thengudi	-	10°55'00"	79°38'20"	5.000	9.620	28/11/2008	2014 - 2015	02/07/1997	07/11/2003	01/09/2005
8	Musiri	66243	10°56'36"	78°26'06"	82.000	86.650	25/10/2005	2014 - 2015	01/06/1972	31/03/1973	01/06/1978
9	Nallamaranpatty	9080	10°52'51"	77°59'05"	129.000	134.850	19/11/1979	2014 - 2015	23/01/1978	10/12/1978	16/08/1978
10	Elunuthimangalam	3386	11°01'54"	77°53'15"	129.000	132.050	24/10/1999	2014 - 2015	07/08/1998	01/03/2013	03/10/2000
11	Kodumudi	53233	11°04'52"	77°53'25"	121.570	127.830	25/10/2005	2014 - 2015	21/06/1971	11/07/1972	01/06/1978
12	Savandapur	5776	11°31'17"	77°30'36"	180.000	186.878	20/11/1979	2014 - 2015	17/07/1978	24/04/1979	02/04/1979
13	Thengumarahada	1370	11°34'22"	76°55'09"	336.650	341.650	16/07/2009	2014 - 2015	01/06/1979	01/06/2002	01/06/1979
14	Gandhavayal	90.71	11°22'27"	76°59'32"	-	95.150	24/11/2013	2014-2015	15/03/2013	-	01/04/2013
15	Nellithurai	1475	11°17'16"	76°53'28"	301.000	308.250	23/07/1989	2014 - 2015	01/06/1979	01/07/2002	01/06/1979
16	Urachikottai	44100	11°28'40"	77°42'00"	155.000	165.830	06/07/1980	2014 - 2015	01/06/1979	04/01/2001	01/06/1979
17	Thevur	1248	11°31'38"	77°45'03"	168.000	173.200	27/10/2010	2014 - 2015	24/09/1999	-	01/10/2001
18	Sevanur	258	11°33'07"	77°43'55"	170.000	172.380	13/10/2009	2014 - 2015	20/09/1999	-	01/10/2001
19	Thoppur	362	11°56'18"	78°03'26"	320.000	325.810	24/11/2005	2014 - 2015	21/10/1999	-	01/11/2001
20	Kudlur	709	11°50'26"	77°27'46"	433.000	438.555	19/04/2001	2014 - 2015	06/03/1999	01/03/2013	02/02/2001
21	Hogenakkal	1636	12°07'16"	77°46'55"	252.000	256.350	24/10/2005	2014 - 2015	05/10/1996	-	01/11/2004
22	Billigundulu	36682	12°10'56"	77°43'26"	255.000	265.560	30/07/1991	2014 - 2015	30/08/1971	01/06/1972	01/06/1978
23	T.Bekuppe	3500	12°30'29"	77°25'39"	604.000	606.700	12/07/2004	2014 - 2015	24/11/2003	26/03/2013	01/12/2003
24	T.K.Halli	7890	12°25'00"	77°11'33"	580.000	585.925	03/10/1984	2014 - 2015	12/06/1978	01/06/1985	02/06/1979
25	Kollegal	21082	12°11'21"	77°06'00"	622.000	629.750	29/07/1991	2014 - 2015	06/02/1971	15/03/1972	01/06/1978
26	Bendrahalli	1900	12°09'13"	77°04'48"	631.000	635.200	07/11/2010	2014 - 2015	18/08/2005	-	01/04/2008
27	T.Narasipur	7000	12°13'48"	76°53'39"	635.000	643.187	29/07/1991	2014 - 2015	12/03/1971	20/03/1972	01/06/1978
28	Muthankera	1260	11°48'30"	76°05'02"	705.000	712.737	22/06/1992	2014 - 2015	01/06/1973	15/02/1974	01/06/1978
29	K.M.Vadi	1330	12°20'46"	76°17'16"	766.500	772.190	04/07/1980	2014 - 2015	26/06/1979	-	01/07/1979
30	Akkihebbal	5236	12°36'10"	76°24'03"	745.000	752.380	03/08/2013	2014 - 2015	23/01/2002	26/03/2013	02/09/2002
31	M.H.Halli	3050	12°49'08"	76°08'00"	838.000	846.477	28/07/1991	2014 - 2015	16/10/1978	01/06/1994	01/07/1980
32	Thimmanahalli	1010	12°58'57"	76°02'17"	902.425	909.665	16/07/2009	2014 - 2015	29/06/2000	-	02/09/2002
33	Sakleshpur	617	12°56'37"	75°47'37"	882.470	892.970	16/07/2009	2014 - 2015	05/04/2002	26/03/2014	02/09/2002
34	Chunchunkatte	2995	12°30'34"	76°18'04"	748.000	757.180	19/07/2009	2014 - 2015	19/07/2008	-	03/10/2008
35	Kudige	1934	12°30'09"	75°57'40"	809.000	820.410	03/07/1980	2014 - 2015	01/11/1973	01/11/1973	01/06/1978

Source : Water Year Book (June 2014 to May 2015) Cauvery Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

VII Basin : Pennar											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Nellore	50800	14°28'13"	79°59'20"	43.500	51.215	18/11/1991	2014 - 2015	28/08/1987	21/06/2014	01/09/1988
2	Nandipalli	2486	14°43'16"	79°01'08"	95.000	102.430	19/10/1996	2014 - 2015	18/06/1990	12/06/2013	01/06/1994
3	Chennur	37981	14°34'20"	78°48'00"	115.805	123.375	24/08/2000	2014 - 2015	13/07/1989	08/08/1989	01/09/1989
4	Kamalapuram	7187	14°35'30"	78°41'00"	135.650	139.200	20/10/1996	2014 - 2015	16/06/1990	-	01/06/1994
5	Alladupalli	8758	14°43'02"	78°40'07"	132.955	142.085	24/06/2007	2014 - 2015	21/08/1985	11/07/1996	01/07/1987
6	Singavaram	6262	14°35'52"	78°00'48"	256.465	260.355	12/09/1988	2014 - 2015	25/09/1979	-	15/09/1981
7	Tadipattri	12482	14°55'19"	78°00'59"	227.500	230.340	04/11/1975	2014 - 2015	12/12/1971	-	01/09/1979
8	Nagalamedike	5050	14°11'20"	77°22'20"	544.550	549.545	12/09/1988	2014 - 2015	17/07/1978	-	01/06/1980

Source: Water Year Book (June 2014 to May 2015) East Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

VIII Basin : East Flowing Rivers from Mahanadi to Pennar											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Marella	7681	15°52'55"	79°54'36"	95.000	101.420	21/05/2010	2014 - 2015	28/06/2007	01/08/2007	01/09/2007
2	Gunupur	6740	19°05'00"	83°49'00"	80.250	85.950	07/08/2007	2014 - 2015	01/06/2001	15/11/2013	30/12/2013
3	Kashi Nagar	7820	18°50'49"	83°57'04"	51.000	57.850	07/08/2007	2014 - 2015	28/04/1971	13/10/1972	01/09/1972
4	Purushottampur	7112	19°31'00"	84°53'00"	12.000	18.640	25/10/2013	2014 - 2015	14/06/1989	15/01/2001	08/10/2001
5	Srikakulam	9500	18°18'48"	83°53'18"	6.650	14.085	04/08/2006	2014 - 2015	25/08/1990	27/06/2001	27/06/2001
6	Anakapalli	2090	17°41'00"	83°01'08"	20.400	27.480	04/11/2012	2014 - 2015	16/08/1989	-	-

Source: Water Year Book (June 2014 to May 2015) East Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

IX Basin : East Flowing Rivers from Pennar to Kanyakumari											
Sl. No.	Site Name	Drainage Area	Latitude	Longitude	Zero of Gauge	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Naidupeta	2650	13°56'54"	79°53'46"	42.000	44.340	26/11/1979	2014 - 2015	01/12/1978	22/10/2013	01/12/1980
2	Sulurpet	5927	13°42'28"	80°00'36"	13.000	19.235	15/11/1991	2014 - 2015	05/10/1988	23/10/2013	01/12/1988
3	Chengalpet	16230	12°39'00"	79°56'50"	26.000	29.220	14/11/1985	2014 - 2015	01/10/1978	-	01/06/1979
4	Magaral	1803	12°42'34"	79°44'57"	58.000	62.280	16/12/1996	2014 - 2015	25/11/1971	-	01/11/1983
5	Arcot	10174	12°54'50"	79°20'00"	159.000	161.047	18/11/1991	2014 - 2015	20/09/1979	-	01/06/1988
6	Avarankuppam	3300	12°41'03"	78°32'22"	365.275	368.450	11/09/1981	2014 - 2015	07/06/1978	-	01/08/1979
7	Kumarapalayam	2208	11°59'00"	79°40'50"	8.825	13.120	31/12/2011	2014 - 2015	02/11/2004	-	12/12/2005
8	Villupuram	12900	11°52'14"	79°27'34"	43.000	45.700	13/11/1977	2014 - 2015	09/10/1972	-	01/01/1987
9	Vazhavachanur	10780	12°03'57"	78°58'41"	133.000	138.782	17/11/1991	2014 - 2015	21/07/1978	19/10/2001	01/08/1978
10	Gummanur	4620	12°33'18"	78°08'18"	490.000	495.600	24/10/2005	2014 - 2015	20/09/1978	26/08/1981	20/09/1978
11	Kudalaiyathur	7890	11°25'20"	79°28'15"	41.000	48.892	05/12/1993	2014 - 2015	15/11/1989	-	01/06/1993
12	Paramakudi	6796	09°33'12"	78°35'11"	38.000	41.385	20/11/1979	2014 - 2015	03/11/1971	01/03/2013	05/11/1989
13	Theni	1200	10°00'04'	77°29'06"	281.650	287.950	19/11/1979	2014 - 2015	01/06/1978	29/01/1979	15/07/1978
14	Ambasamudram	850	09°55'32'	77°30'42"	296.500	298.900	08/11/2009	2014 - 2015	05/01/1999	09/10/2002	01/08/1999
15	Irukkankudi	3721	09°19'27"	77°59'26"	46.000	51.000	14/12/1998	2014 - 2015	25/11/1989	-	01/06/1993
16	Murappanadu	4380	08°42'52"	77°50'06"	14.025	21.350	14/11/1992	2014 - 2015	23/11/1977	15/02/1979	15/08/1978
17	A.P.Puram	1095	08°54'05'	77°38'55"	63.000	67.823	14/11/1992	2014 - 2015	01/12/1979	-	01/06/1993

Source: Water Year Book (June 2014 to May 2015) East Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

X Basin : Narmada											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Chandwada	3846	22°01'48"	73°25'30"	18.000	33.550	07/09/1994	2014 - 2015	01/11/1979	01/08/1988	15/03/1980
2	Gurudeshwar	87892	21°53'00"	73°39'00"	10.000	39.780	07/09/1994	2014 - 2015	23/03/1972	21/03/1973	15/06/1977
3	Pati	2151	21°56'37"	74°44'42"	187.000	195.850	05/08/2001	2014 - 2015	15/06/2008	-	01/07/2008
4	Dhulsar	787	22°12'20"	74°51'06"	151.000	155.100	05/08/2004	2014 - 2015	15/06/2008	-	01/08/2008
5	Mandleshwar	72809	22°10'18"	75°39'39"	138.000	157.230	06/09/1994	2014 - 2015	28/08/1971	14/04/1972	18/06/1979
6	Kogaon	3919	22°06'06"	75°41'02"	151.000	161.850	03/09/2002	2014 - 2015	01/07/1978	-	15/09/1986
7	Handia	54027	22°29'25"	76°59'37"	258.000	274.150	24/08/2013	2014 - 2015	26/04/1977	11/12/1977	01/08/1979
8	Chhidgaon	1729	22°24'21"	77°18'28"	287.000	301.810	08/07/2007	2014 - 2015	22/12/1976	-	16/09/1986
9	Hoshangabad	44548	22°45'21"	77°43'58"	282.000	300.805	20/08/1974	2014 - 2015	16/09/1972	29/12/1972	15/07/1979
10	Sandia	33953.5	22°54'57"	78°20'51"	297.000	316.890	19/09/1999	2014 - 2015	18/04/1978	09/08/1978	15/09/1979
11	Gadarwara	2270	22°55'26"	78°47'20"	321.000	332.470	18/09/1999	2014 - 2015	01/02/1977	15/06/1978	16/08/1979
12	Barmanghat	26453	23°01'52"	79°00'56"	306.000	330.455	30/08/1973	2014 - 2015	20/11/1971	27/08/1972	01/06/1979
13	Belkheri	1508	22°55'40"	79°20'23"	340.000	359.950	21/07/1994	2014 - 2015	16/03/1977	-	01/09/1986
14	Patan	3950	23°18'42"	79°39'46"	341.500	356.800	06/07/2005	2014 - 2015	30/08/1979	-	01/09/1986
15	Bamni	1864	22°29'06"	80°22'58"	440.000	446.930	15/09/2005	2014 - 2015	30/11/1999	01/07/2002	01/07/2002
16	Mohgaon	3919	22°45'57"	80°37'22"	447.000	467.300	08/08/2004	2014 - 2015	13/01/1977	27/08/1992	16/09/1986
17	Manot	4667	22°44'08"	80°30'44"	442.000	459.650	18/08/1984	2014 - 2015	16/12/1976	09/11/1979	01/01/1980
18	Dindori	2292	22°56'53"	81°04'34"	660.000	669.640	23/08/1991	2014 - 2015	01/08/1988	-	15/03/1990
19	Bijora	14561	22°55'30"	79°55'30"	366.000	380.500	08/08/2011	2014 - 2015	01/06/1967	01/06/1980	-

Source : Water Year Book (June 2014 to May 2015) Narmada Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

XI Basin : Tapi											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Burhanpur	8487	21°17'12"	76°30'18"	213.000	239.500	29/08/1978	2014 - 2015	14/09/1972	23/12/1972	01/06/1977
2	Gopalkheda	9500	20°52'35"	76°59'14"	236.000	252.100	10/08/1979	2014 - 2015	17/02/1977	30/07/1979	01/08/1979
3	Yerli	16517	20°56'11"	76°28'27"	213.000	233.540	07/08/2006	2014 - 2015	01/03/1972	09/04/1973	01/06/1977
4	Gidhade	54750	21°17'45"	74°48'45"	119.000	141.650	08/08/2006	2014 - 2015	19/06/1990	-	01/09/1990
5	Sarangkheda	58400	21°25'55"	74°31'37"	108.000	126.000	08/08/2006	2014 - 2015	19/10/1977	13/07/1984	01/01/1980
6	Dedtalai	3860	21° 30'47"	76° 45'26"	108.000	126.000	08/08/2006	2014 - 2015	19/10/1977	13/07/1984	01/01/1980

Source : Water Year Book (June 2014 to May 2015) Tapi Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

XII Basin : West Flowing Rivers from Tapi to Tadri											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Badalapur	785	19°09'44"	73°15'16"	9.017	21.097	27/07/2005	2014 - 2015	27/06/1981	-	02/07/1993
2	Pen	125	18°44'12"	73°06'39"	7.000	14.730	25/07/2005	2014 - 2015	17/09/1996	-	-
3	Nagothane	420	18°31'09"	73°09'23"	2.000	12.420	16/07/1999	2014 - 2015	25/09/1996	-	-
4	Mangaon (Seasonal)	259	18°13'53"	73°17'01"	3.905	10.255	24/07/1989	2014 - 2015	27/06/1980	-	02/07/1993
5	Anjanari	315	16°56'04"	73°30'50"	11.000	18.650	24/07/2010	2014 - 2015	08/08/1991	-	-
6	Belne Bridge	605	16°13'18"	73°36'40"	8.500	18.380	29/07/2010	2014 - 2015	16/06/2000	-	03/07/2000
7	Ganjim	880	15°28'16"	74°05'58"	0.000	12.510	29/07/1982	2014 - 2015	20/01/1979	-	-
8	Collem	117	15°20'20"	74°14'55"	65.000	71.550	10/08/2008	2014 - 2015	15/12/1979	-	-
9	Santeguli	1090	14°26'04"	74°35'20"	8.000	18.370	17/07/2011	2014 - 2015	09/06/1988	-	01/09/1993

Source: Water Year Book (June 2014 to May 2015) West Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Haladi	583	13°34'54"	74°51'28"	15.115	21.666	09/08/1986	2014 - 2015	30/12/1985	-	01/09/1993
2	Avershe	253	13°31'17"	74°52'48"	88.000	95.670	02/08/2005	2014 - 2015	25/06/2002	-	02/09/2002
3	Yennehole	327	13°17'39"	74°58'51"	15.000	24.650	06/07/2009	2014 - 2015	24/07/1989	-	01/09/1993
4	Addoor	688	12°55'44"	74°57'14"	10.000	15.480	04/08/2004	2014 - 2015	17/07/2003	-	02/09/2002
5	Bantwal	3184	12°52'51"	75°02'28"	1.000	12.650	26/07/1974	2014 - 2015	01/11/1970	22/06/1972	15/06/1978
6	Erinjipuzha	957	12°29'45"	75°09'25"	9.100	18.790	18/07/1999	2014 - 2015	25/06/1985	13/06/1988	01/07/1988
7	Perumannu	1070	11°58'51"	75°34'40"	3.470	14.690	07/08/2012	2014 - 2015	26/06/1985	26/07/1986	02/06/1986
8	Kuttyadi	238	11°39'03"	75°45'30"	0.000	7.790	18/07/2009	2014 - 2015	13/03/2000	01/06/2013	01/10/2002
9	Kuniyil	1876	11°14'22"	76°01'24"	3.300	12.530	18/08/1981	2014 - 2015	04/01/1979	21/01/1979	15/01/1979
10	Karathodu	750	11°03'25"	76°02'22"	89.000	93.615	09/07/1987	2014 - 2015	20/06/1986	22/06/1989	01/12/1988
11	Kumbidi	5755	10°51'16"	76°01'12"	4.000	9.610	27/06/1985	2014 - 2015	08/01/1979	24/06/1980	03/12/1979
12	Pulamanthole	940	10°53'53"	76°11'31"	84.500	90.145	09/08/1986	2014 - 2015	17/02/1986	28/08/1986	02/06/1986
13	Mankara	2775	10°45'40"	76°29'10"	45.830	50.971	14/11/1992	2014 - 2015	21/06/1985	24/09/2013	02/06/1986
14	Pudur	1313	10°46'39"	76°30'44"	58.285	64.930	08/11/2009	2014 - 2015	02/09/1985	01/10/2013	02/06/1986
15	Ambarampalayam	950	10°37'53"	76°56'46"	217.000	224.780	08/11/2009	2014 - 2015	09/03/1978	01/08/2002	01/08/1978
16	Arangaly	1342	10°17'10"	76°19'20"	0.000	7.580	27/06/1985	2014 - 2015	27/04/1978	08/07/1980	01/08/1978
17	Neeleswaram	4234	10°11'01"	76°29'44"	-3.000	9.750	25/06/1971	2014 - 2015	16/03/1971	26/09/1972	15/06/1978
18	Vandiperiyar	712	09°34'24"	77°05'26"	789.000	793.620	27/07/2005	2014 - 2015	07/06/2000	-	01/10/2002
19	Ramamangalam	1208	09°56'37"	76°28'42"	0.000	8.300	28/06/1985	2014 - 2015	25/04/1978	20/02/1979	15/08/1978
20	Kalampur	405	09°59'26"	76°37'56"	89.535	94.955	26/08/1987	2014 - 2015	23/06/1986	01/06/1988	01/06/1988
21	Kidangoor	615	09°40'30"	76°36'10"	-1.200	7.900	03/08/1994	2014 - 2015	02/07/1985	01/06/1987	02/06/1986
22	Kallooppara	731	09°24'13"	76°39'01"	0.000	9.050	03/08/1994	2014 - 2015	19/06/1985	19/05/1986	02/06/1986
23	Malakkara	1713	09°19'57"	76°39'47"	-1.000	7.790	10/07/2001	2014 - 2015	19/06/1985	18/06/1986	01/07/1986
24	Thumpamon	810	09°13'30"	76°42'52"	5.000	13.735	07/11/1978	2014 - 2015	28/01/1978	23/03/1981	15/10/1978
25	Pattazhy	1210	09°04'22"	76°45'40"	3.000	13.702	15/11/1992	2014 - 2015	20/04/1978	25/09/1980	15/10/1978
26	Ayilam	540	08°42'54"	76°51'00"	0.000	10.367	10/10/1992	2014 - 2015	18/12/1978	26/12/1978	02/01/1979
27	Kuzhithurai	841	08°18'21"	77°11'50"	0.000	8.830	08/12/2010	2014 - 2015	01/11/2000	-	02/12/2002
28	Ashramam	258	08°09'33"	77°27'32"	1.000	5.675	09/12/2010	2014 - 2015	21/09/1999	-	02/12/2002

Source: Water Year Book (June 2014 to May 2015) West Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

XIV Basin : Mahi											
Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Khanpur	32510	22°31'55"N	73°08'27"E	8.220	26.820	12/08/2006	2014 - 2015	21/12/1978	01/05/1988	01/01/1979
2	Chakaliya	3121	23°02'58"N	74°19'14"E	215.000	226.900	11/08/2006	2014 - 2015	13/02/1991	-	-
3	Paderdibadi	16247	23°46'02"N	74°08'12"E	131.000	147.525	19/08/2006	2014 - 2015	24/06/1978	21/07/1980	01/07/1978
4	Rangeli	8329	23°52'22"N	74°13'25"E	150.000	158.240	19/08/2006	2014 - 2015	15/07/1978	-	01/07/1988
5	Dhariawad	1510	24°04'43"N	74°28'02"E	203.000	209.350	11/08/2006	2014 - 2015	01/06/1988	-	-
6	Mataji	3880	23°20'57"N	74°43'31"E	295.000	307.000	04/10/1988	2014 - 2015	21/07/1982	21/07/1982	21/07/1982

Source: Water Year Book (June 2014 to May 2015) Mahi, Sabarmati & Others West Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

XV Basin : Sabarmati											
Sl. No.	Site Name	Drainage Area	Latitude	Longitude	Zero of Gauge	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Voutha	19636	22°38'59"N	72°32'08"E	12.000	20.660	10/07/2007	2014 - 2015	24/06/2000	-	01/01/2000
2	Kheda	7550	22°44'45"N	72°40'49"E	19.750	28.200	25/08/1990	2014 - 2015	10/07/1989	-	-
3	Ratanpur(Gadvel)	2916	22°58'31"N	72°53'02"E	39.100	44.980	12/08/2006	2014 - 2015	11/07/1989	-	-
4	Derol Bridge	6724	23°34'24"N	72°48'25"E	89.000	94.730	20/08/1994	2014 - 2015	01/06/1991	25/09/1992	15/07/1992
5	Kheroj	3650	24°13'45"N	73°00'26"E	211.680	215.450	19/08/2006	2014 - 2015	22/06/1992	-	-
6	Kotra(Jotasan)	1421	24°21'20"N	73°10'05"E	285.000	291.550	20/08/2006	2014 - 2015	14/06/1995	-	-

Source: Water Year Book (June 2014 to May 2015) Mahi, Sabarmati & Others West Flowing Rivers Basin.

Table 4 : Important Historical Observations by sites and River Basin during 2014-2015

XVI Basin : WFR of Kutch, Saurashtra Including Luni											
Sl. No.	Site Name	Drainage Area	Latitude	Longitude	Zero of Gauge	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Gandhav	32010	24°59'22"N	71°40'47"E	31.000	38.880	19/07/1979	2014 - 2015	24/06/1974	-	-
2	Balotra	19000	25°49'19"N	72°13'23"E	102.000	107.150	06/07/1990	2014 - 2015	05/07/1990	-	-
3	Kamalpur	6960	23°47'59"N	71°45'00"E	34.000	38.010	08/09/1992	2014 - 2015	25/07/1971	25/08/1973	01/06/1977
4	Chitrasani	345	24°17'20"N	72°29'54"E	184.000	187.120	12/09/2011	2014 - 2015	01/06/1990	-	15/07/1988
5	Sarotry	2200	24°22'04"N	72°32'48"E	186.000	190.780	08/09/1992	2014 - 2015	01/06/1990	-	-
6	Abu Road	1600	24°29'38"N	72°47'30"E	254.850	258.397	08/09/1992	2014 - 2015	01/06/1990	-	01/07/1988
7	Lowara	3953	21°26'36"N	71°33'42"E	56.000	66.930	09/11/1982	2014 - 2015	29/11/1970	25/07/1973	01/07/1977
8	Ganod	6266	21°39'53"N	70°10'52"E	26.000	34.100	22/06/1983	2014 - 2015	14/11/1970	07/07/1973	01/07/1973
9	Gungan	2137	22°57'42"N	70°45'52"E	8.000	16.000	24/06/1997	2014 - 2015	09/12/1970	-	-
10	Sapawada	2125	23°32'54"N	72°00'52"E	36.650	43.000	27/06/1997	2014 - 2015	31/08/1989	-	-

Source: Water Year Book (June 2014 to May 2015) Mahi, Sabarmati & Others West Flowing Rivers Basin.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

I Basin : Mahanadi												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Andhiarkhore	Monsoon	639	213	199	84	34	217	292	201	517	459
		Non-Monsoon	18	6	9	2	1	9	13	13	33	31
		Annual	657	219	208	86	35	226	305	214	550	490
2	Bamnidhi	Monsoon	3218	2309	1993	1486	896	1328	4164	2126	1785	3166
		Non-Monsoon	1146	863	443	316	170	174	165	239	305	255
		Annual	4364	3172	2436	1802	1066	1502	4329	2365	2090	3421
3	Baronda	Monsoon	1249	1960	2871	1822	627	1853	799	912	1514	1210
		Non-Monsoon	15	7	8	3	2	10	1	1	1	3
		Annual	1264	1967	2879	1825	629	1863	800	913	1515	1213
4	Basantpur	Monsoon	24347	22784	24210	12754	14251	19539	22030	20306	24287	26650
		Non-Monsoon	1505	1386	680	739	350	486	634	753	696	517
		Annual	25852	24170	24890	13493	14601	20025	22664	21059	24982	27167
5	Ghatora	Monsoon	954	503	645	496	224	395	1091	889	793	911
		Non-Monsoon	27	5	9	4	0	1	0	0	37	34
		Annual	981	508	654	500	224	396	1091	889	831	945
6	Jondhra	Monsoon	12552	7451	10156	3451	4317	9213	11410	10601	17748	15622
		Non-Monsoon	164	72	161	41	38	0	0	53	0	114
		Annual	12716	7523	10317	3492	4355	9213	11410	10654	17748	15736
7	Kantamal	Monsoon	7742	19861	15324	16770	10523	9036	6305	8210	10999	13131
		Non-Monsoon	1576	1211	1430	1159	917	1240	319	1062	1548	1333
		Annual	9318	21072	16754	17929	11440	10276	6624	9272	12547	14464
8	Kesinga	Monsoon	5443	13253	11117	9315	5737	6388	4416	5496	8834	9292
		Non-Monsoon	1104	1146	1271	899	594	976	268	1024	1856	1118
		Annual	6547	14399	12388	10214	6331	7364	4684	6520	10690	10410
9	Kotni	Monsoon	2651	2190	2712	855	413	2346	1879	1815	4092	1931
		Non-Monsoon	11	1	16	0	0	0	0	0	0	0
		Annual	2662	2191	2728	855	413	2346	1879	1815	4092	1931
10	Kurubhata	Monsoon	1902	1577	1766	2051	940	1211	2867	1642	2170	1676
		Non-Monsoon	45	37	57	49	37	53	134	46	109	55
		Annual	1947	1614	1823	2100	977	1264	3001	1688	2278	1731

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar.

Contd/...

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

I Basin : Mahanadi												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
11	Manendragarh	Monsoon	380	249	150	301	143	185	445	236	227	304
		Non-Monsoon	43	10	3	8	6	1	2	4	11	11
		Annual	423	259	153	309	149	186	447	240	237	315
12	Pathardih	Monsoon	1719	1192	1125	566	739	1000	1311	995	1637	1328
		Non-Monsoon	14	7	2	0	0	1	0	0	0	0
		Annual	1733	1199	1127	566	739	1000	1311	995	1637	1328
13	Rajim	Monsoon	2743	4733	3998	2764	1514	3490	1982	1831	3572	3713
		Non-Monsoon	22	17	39	25	5	42	1	0	9	19
		Annual	2765	4750	4037	2789	1519	3532	1983	1831	3581	3732
14	Rampur	Monsoon	987	2183	1793	1035	684	764	1249	1001	1299	1359
		Non-Monsoon	14	3	4	0	4	7	14	4	19	8
		Annual	1001	2186	1797	1035	688	771	1263	1005	1318	1366
15	Salebhata	Monsoon	1036	3614	1723	1963	2277	1000	2112	2876	1720	4162
		Non-Monsoon	25	22	34	15	38	8	28	29	54	24
		Annual	1061	3636	1757	1978	2315	1008	2140	2905	1774	4186
16	Seorinarayan	Monsoon	22160	19768	20763	10380	10394	14273	18075	16832	20838	20857
		Non-Monsoon	209	185	220	129	163	384	415	242	450	304
		Annual	22369	19953	20983	10509	10557	14657	18490	17074	21288	21161
17	Simga	Monsoon	9206	5963	7352	1998	2529	4837	5744	4419	9277	7592
		Non-Monsoon	66	46	87	17	50	102	67	52	126	55
		Annual	9272	6009	7439	2015	2579	4939	5811	4472	9403	7648
18	Sundergarh	Monsoon	2308	2147	3165	2848	2675	1809	4089	3000	2305	1962
		Non-monsoon	56	51	89	45	68	73	124	106	147	92
		Annual	2364	2198	3254	2893	2743	1882	4213	3105	2452	2053
19	Tikarpara	Monsoon	42136	56562	49920	51563	39313	33466	39915	43193	46492	63601
		Non-Monsoon	4701	5383	7967	7691	4106	5830	5311	4940	5149	4832
		Annual	46837	61945	57887	59254	43419	39296	45226	48133	51640	68433

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

II Basin : Subarnarekha & Bhurhabalang												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Adityapur	Monsoon	1127	3737	4479	3426	2174	203	3140	2089	4612	2844
		Non-Monsoon	74	68	96	49	57	31	71	51	296	91
		Annual	1201	3805	4575	3475	2231	234	3211	2140	4908	2935
2	Anandpur	Monsoon	4974	5203	8245	5038	2597	1154	6479	2579	5762	4093
		Non-Monsoon	315	271	355	214	187	153	329	149	278	181
		Annual	5289	5474	8600	5252	2784	1307	6808	2728	6040	4274
3	Champua	Monsoon	1050	1084	1611	1316	696	389	1567	702	1138	993
		Non-Monsoon	95	95	119	109	75	51	100	55	112	88
		Annual	1145	1179	1730	1425	771	440	1667	757	1250	1081
4	Ghatsila	Monsoon	2809	9941	11398	9580	6845	1312	12681	6105	8302	6318
		Non-Monsoon	238	730	540	534	693	544	1194	578	711	772
		Annual	3047	10671	11938	10114	7538	1856	13876	6682	9013	7090
5	Govindpur	Monsoon	2901	3518	5444	4583	3084	1687	4236	1968	6017	3434
		Non-Monsoon	174	138	211	108	106	163	128	87	724	1157
		Annual	3075	3656	5655	4691	3190	1850	4364	2055	6741	4592
6	Jamshedpur	Monsoon	2229	7944	8480	8972	4768	618	8875	4285	8897	6636
		Non-Monsoon	229	432	239	222	554	176	387	343	287	497
		Annual	2458	8376	8719	9194	5322	794	9262	4628	9184	7133
7	Muri	Monsoon	219	660	660	697	260	63	664	358	340	253
		Non-Monsoon	15	68	51	46	30	10	27	23	50	27
		Annual	234	728	711	743	290	73	691	381	390	279

Source : Mananadi & Eastern Rivers Organisation, CWC, Bhubaneswar.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

III Basin : Brahamni & Baitarani												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Altuma	Monsoon	771	514	718	598	597	216	817	452	677	671
		Non-Monsoon	60	48	53	54	48	26	68	49	64	44
		Annual	831	562	771	652	645	242	885	501	741	716
2	Gomlai	Monsoon	6464	10466	15679	13046	6108	2878	15449	7958	12689	10367
		Non-Monsoon	357	318	434	301	201	168	431	312	671	287
		Annual	6821	10784	16113	13347	6309	3046	15880	8270	13360	10654
3	Jaraikela	Monsoon	2401	4140	5573	4717	2117	987	5042	2697	2385	1292
		Non-Monsoon	184	206	229	134	98	96	272	113	320	153
		Annual	2585	4346	5802	4851	2215	1083	5314	2810	2704	1445
4	Jenapur	Monsoon	14233	12825	20287	17695	8855	3525	18484	10523	12673	14236
		Non-Monsoon	2312	1982	2249	2180	2084	1880	3423	3507	3139	1648
		Annual	16545	14807	22536	19875	10939	5405	21907	14030	15811	15883
5	Panposh	Monsoon	6665	9554	13145	11764	6378	2942	17693	9856	11008	8310
		Non-Monsoon	418	302	435	350	233	256	501	298	700	211
		Annual	7083	9856	13580	12114	6611	3198	18194	10154	11708	8521
6	Tilga	Monsoon	1706	1519	1796	1946	1577	831	2505	1830	2117	1660
		Non-Monsoon	62	69	68	41	47	68	127	82	155	92
		Annual	1768	1588	1864	1987	1624	899	2632	1913	2273	1751

Source : Mananadi & Eastern Rivers Organisation, CWC, Bhubaneswar.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

IV Basin : Godavari												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Ambabal at Narangi	Monsoon	545	1521	1109	711	473	1134	478	585	809	940
		Non-Monsoon	4	9	5	1	1	8	165	0	0	0
		Annual	549	1529	1113	712	474	1142	642	585	809	940
2	Betmogrra at Maner	Monsoon	439	210	44	15	0	229	228	9	148	30
		Non-Monsoon	5	4	5	0	0	7	8	0	10	0
		Annual	444	214	49	15	0	236	236	9	158	30
3	Bhadrachalam at Godavari	Monsoon	-	-	69003	47231	24199	103332	45598	70766	136197	47130
		Non-Monsoon	-	-	4353	1926	1857	4849	1908	4339	6595	2725
		Annual	-	-	73356	49157	26056	108181	47506	75105	142791	49856
4	Cherribeda at Bardha	Monsoon	595	1197	941	366	372	827	306	621	939	1457
		Non-Monsoon	11	20	11	5	3	15	11	15	33	33
		Annual	606	1216	952	371	374	842	317	636	972	1490
5	Chindnar at Indravathi	Monsoon	7642	15295	10513	6603	4484	11844	4640	8746	9955	10587
		Non-Monsoon	117	129	99	50	86	243	135	257	638	340
		Annual	7759	15424	10612	6654	4570	12087	4775	9003	10593	10927
6	Degloor at Lendi	Monsoon	500	385	65	78	25	297	221	227	263	42
		Non-Monsoon	3	1	0	0	0	0	0	0	20	0
		Annual	503	386	65	78	25	297	221	227	283	42
7	Dhalegaon at Godavari	Monsoon	3629	6550	886	1034	172	408	193	0	0	0
		Non-Monsoon	5	12	4	0	0	0	0	0	0	0
		Annual	3633	6562	890	1034	172	408	193	0	0	0
8	G.R.Bridge at Godavari	Monsoon	4601	7075	887	1048	65	698	498	231	717	220
		Non-Monsoon	44	0	69	0	0	0	0	0	55	0
		Annual	4644	7075	956	1048	65	698	498	231	773	220
9	Gandlapet at Peddavagu	Monsoon	23	100	0	0	0	63	62	19	355	3
		Non-Monsoon	0	0	0	0	0	0	0	0	26	0
		Annual	23	100	0	0	0	63	62	19	381	3
10	Jagdalpur at Indravathi	Monsoon	1730	3471	3056	1824	1342	2728	1160	2365	2691	2448
		Non-Monsoon	75	61	63	44	64	113	49	40	78	34
		Annual	1805	3532	3119	1868	1406	2841	1210	2405	2769	2482

Source : SE, Godavari Circle, Central Water Commission, Hyderabad , Wainganga Division, Nagpur.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

IV Basin : Godavari												Unit : MCM
SN	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
11	Kiwaibalenga at Bawardhi	Monsoon	-	-	-	3	1	1286	468	798	1248	341
		Non-Monsoon	2	0	1	1	0	40	6	8	27	12
		Annual	2	0	1	3	1	1326	474	806	1275	353
12	Konta at Sabari	Monsoon	10218	19994	15951	10692	6090	15738	7442	13296	16960	15322
		Non-Monsoon	3523	3109	3575	2342	1482	3730	2274	4385	4598	4198
		Annual	13741	23103	19526	13034	7572	19468	9716	17680	21557	19520
13	Kosagumda at Bhaskal	Monsoon	724	1324	1281	970	583	1287	646	889	1020	2625
		Non-Monsoon	26	21	16	7	9	45	16	38	63	53
		Annual	750	1345	1297	977	592	1332	662	927	1083	2678
14	Mancherial at Godavari	Monsoon	10898	14815	925	2171	431	9436	2381	1825	6670	767
		Non-Monsoon	243	300	185	169	34	332	266	398	820	250
		Annual	11141	15115	1110	2340	464	9767	2647	2224	7489	1017
15	Murthahandi at Journala	Monsoon	859	1622	1456	947	828	1364	781	1048	1342	1193
		Non-Monsoon	130	149	220	150	141	281	120	231	247	195
		Annual	989	1771	1676	1097	969	1645	900	1279	1589	1388
16	Nowrangpur at Indravathi	Monsoon	716	2181	1541	660	583	1070	484	854	1214	1218
		Non-Monsoon	63	61	140	115	105	155	46	64	144	94
		Annual	779	2242	1682	775	689	1225	531	917	1358	1312
17	Pachegaon at Pravara	Monsoon	1277	2423	1414	950	18	215	380	54	161	69
		Non-Monsoon	0	0	0	0	0	7	0	131	98	195
		Annual	1277	2423	1414	950	18	222	380	185	259	265
18	Pathagudem at Indravathi	Monsoon	21365	36592	24520	18300	11128	30610	13336	25587	38360	23315
		Non-Monsoon	354	480	428	172	140	562	323	742	1634	1016
		Annual	21719	37072	24948	18472	11268	31172	13658	26329	39994	24331
19	Perur at Godavari	Monsoon	82213	106875	63327	40177	22493	97825	50737	77426	143249	51030
		Non-Monsoon	1926	2011	1605	919	857	2405	1836	3164	5847	2416
		Annual	84139	108886	64931	41097	23350	100229	52573	80590	149096	53446
20	Polavaram at Godavari	Monsoon	98327	124623	88589	55646	26655	110940	50647	82244	138191	52145
		Non-Monsoon	8276	7245	5255	2834	2368	6231	5171	9455	11682	6192
		Annual	106603	131868	93844	58479	29023	117171	55818	91698	149873	58337

Source : SE, Godavari Circle, Central Water Commission, Hyderabad, Wainganga Division, Nagpur.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

IV Basin : Godavari												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
21	Potteru (Seasonal) at Potteru vagu	Monsoon	1117	2319	2495	1302	992	1728	1311	1178	2000	1863
		Non-Monsoon	925	927	-	520	-	-	69	118	251	149
		Annual	2042	3246	2495	1822	992	1728	1380	1297	2251	2011
22	Purna at Purna	Monsoon	2680	5532	281	343	227	1492	344	243	1303	116
		Non-Monsoon	10	66	13	0	0	74	12	0	17	0
		Annual	2689	5598	294	343	227	1565	357	243	1321	116
23	Saigaon at Manjera	Monsoon	953	675	438	917	39	2367	587	56	171	9
		Non-Monsoon	1	0	0	0	0	18	0	0	0	0
		Annual	954	675	438	917	39	2384	587	56	171	9
24	Sangam at Murredu	Monsoon	437	229	164	260	22	454	143	225	196	146
		Non-Monsoon	13	18	36	11	19	42	8	58	59	17
		Annual	450	247	200	271	41	496	151	283	255	163
25	Saradaput at Sabari	Monsoon	3106	6754	6227	3416	2446	4675	2841	4616	5837	4508
		Non-Monsoon	690	846	907	549	302	874	445	962	1132	895
		Annual	3796	7600	7134	3965	2748	5548	3286	5577	6970	5403
26	Somanpally (Seasonal) at Maner	Monsoon	754	2039	703	1117	117	1993	306	1060	2450	290
		Non-Monsoon	29	45		1	2	27	8	31	142	12
		Annual	783	2084	703	1118	119	2020	314	1091	2591	302
27	Sonarpal at Markandi	Monsoon	632	1102	801	619	487	983	342	627	737	604
		Non-Monsoon	5	5	1	10	2	15	2	10	33	8
		Annual	637	1107	803	629	489	998	344	637	769	612
28	Tumnar at Dantewara	Monsoon	817	1799	1957	1092	577	1829	685	1482	1551	783
		Non-Monsoon	54	38	57	39	33	48	50	102	177	118
		Annual	871	1837	2014	1131	610	1877	735	1585	1728	901
29	Yelli at Godaavari	Monsoon	9014	12960	1784	1707	511	4985	1383	145	2610	82
		Non-Monsoon	11	15	0	0	0	0	0	0	5	0
		Annual	9025	12974	1784	1707	511	4985	1383	145	2615	82
30	Zari at Dudha	Monsoon	672	764	123	139	161	618	192	39	321	43
		Non-Monsoon	0	1	0	0	0	0	0	0	0	0
		Annual	672	765	123	139	161	618	192	39	321	43

Source : SE, Godavari Circle, Central Water Commission, Hyderabad, Wainganga Division, Nagpur.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

V Basin : Krishna		Unit : MCM										
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Arjunwad (Seasonal) at Krishna	Monsoon	18332	17640	9962	5794	4811	5407	7328	4099	7809	5974
		Non-Monsoon	0	0	0	0	0	2	0	0	0	0
		Annual	18332	17640	9962	5794	4811	5410	7328	4099	7809	5974
2	Bawapuram at Tungabhadra	Monsoon	5621	4169	10595	5111	9253	4396	3425	1073	7847	7048
		Non-Monsoon	507	389	931	391	1161	1316	196	277	38	165
		Annual	6129	4558	11526	5501	10414	5713	3622	1351	7885	7213
3	Cholachguda (Seasonal) at Malaprabha	Monsoon	737	695	1533	240	1272	328	341	42	255	255
		Non-Monsoon	285	90	63	111	75	205	51	21	32	50
		Annual	1022	784	1596	352	1347	533	392	64	287	305
4	Dameracherla at Musi	Monsoon	815	595	1019	1303	1122	815	508	73	1633	344
		Non-Monsoon	730	893	835	796	584	829	235	64	536	360
		Annual	1545	1488	1854	2098	1706	1644	743	137	2168	704
5	Gokak Falls (Seasonal) at Ghataprabha	Monsoon	3975	3050	2197	1405	1180	1308	2319	820	1722	864
		Non-Monsoon	24	37	43	23	52	81	57	31	23	30
		Annual	3999	3087	2239	1428	1233	1389	2376	851	1746	894
6	Halia at Halia	Monsoon	784	79	437	222	107	201	100	12	409	88
		Non-Monsoon	120	92	102	243	130	222	70	14	92	75
		Annual	904	171	539	465	237	423	170	27	501	163
7	Huvinhedigi at Krishna	Monsoon	25444	25627	20673	10509	11085	9280	13437	4526	11507	10293
		Non-Monsoon	1134	1167	1021	1055	1421	1246	696	625	664	587
		Annual	26578	26794	21694	11564	12505	10526	14134	5151	12171	10880
8	Karad at Krishna	Monsoon	9983	10216	6203	3289	2859	2634	3703	1501	3708	2309
		Non-Monsoon	497	608	521	598	530	123	39	0	7	0
		Annual	10481	10824	6723	3887	3389	2757	3742	1501	3716	2309
9	Keesara at Munneru	Monsoon	2719	1969	1311	3903	85	3532	883	1922	1921	422
		Non-Monsoon	495	302	422	308	357	685	182	508	372	180
		Annual	3214	2272	1733	4212	442	4218	1065	2429	2293	602
10	Kurundwad at Krishna	Monsoon	23671	24683	16759	11813	7979	9817	11582	8574	12350	10147
		Non-Monsoon	0	0	0	0	367	9	0	0	0	0
		Annual	23671	24683	16759	11813	8346	9826	11582	8574	12350	10147
11	Madhira at Wyr	Monsoon	728	390	368	663	24	732	276	354	313	126
		Non-Monsoon	217	127	161	98	168	240	92	136	101	119
		Annual	945	517	529	761	192	973	369	491	414	246
12	Malkhed at Kagna	Monsoon	998	62	705	803	1164	2038	629	541	899	724
		Non-Monsoon	94	34	216	116	143	259	55	66	182	82
		Annual	1092	95	921	919	1307	2297	684	607	1081	806

Source : SE, Godavari & Krishna Circle, Central Water Commission, Hyderabad.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

V Basin : Krishna												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
13	Mantralayam at Tungabhadra	Monsoon	6734	4572	11231	5454	10967	5537	4006	1325	7610	6736
		Non-Monsoon	891	869	1581	731	1317	2137	542	628	467	745
		Annual	7625	5441	12812	6185	12284	7674	4548	1953	8077	7481
14	Narasingpur at Bhima	Monsoon	10131	11337	4560	2449	1037	1685	2055	65	1964	993
		Non-Monsoon	316	228	213	365	499	172	0	0	0	0
		Annual	10448	11565	4773	2814	1537	1857	2055	65	1964	993
15	Phulgaon (Seasonal) at Bhima	Monsoon	2801	2720	964	1106	620	359	890	470	2672	1170
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	2801	2720	964	1106	620	359	890	470	2672	1170
16	Sadalga (Seasonal) at Dudhganga	Monsoon	4905	4924	2673	2216	1736	2117	2864	1727	2504	1926
		Non-Monsoon	13	0	0	0	0	51	0	0	0	30
		Annual	4918	4924	2673	2216	1736	2167	2864	1727	2504	1956
17	Samdoli (Seasonal) at Varna	Monsoon	5839	5650	3839	2343	1949	2114	3190	2105	3129	2713
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	5839	5650	3839	2343	1949	2114	3190	2105	3129	2713
18	Sarati at Nira	Monsoon	2600	3015	1865	748	1096	969	678	36	1170	250
		Non-Monsoon	0	53	0	0	298	77	0	0	0	0
		Annual	2600	3068	1865	748	1394	1046	678	36	1170	250
19	T Ramapuram (Seasonal) at Hagari	Monsoon	806	207	814	906	1559	592	210	271	378	346
		Non-Monsoon	275	255	100	111	207	180	79	113	78	175
		Annual	1081	461	914	1017	1766	772	289	384	456	521
20	Takli at Bhima	Monsoon	9277	11671	5348	2094	3490	1470	2056	0	2022	1733
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	9277	11671	5348	2094	3490	1470	2056	0	2022	1733
21	Talikot (Seasonal) at Don	Monsoon	99	172	262	171	701	153	40	52	113	163
		Non-Monsoon	21	1	2	1	2	10	0	1	2	7
		Annual	120	173	264	172	704	163	41	53	115	170
22	Terwad (Seasonal) at Panchganga	Monsoon	8166	8027	5496	4067	3163	3435	4797	3931	5079	4250
		Non-Monsoon	10	11	0	0	0	0	0	0	0	14
		Annual	8176	8038	5496	4067	3163	3435	4797	3931	5079	4264
23	Vijayawada at Krishna	Monsoon	34385	26350	25560	8820	12666	10849	7279	1229	10849	2373
		Non-Monsoon	1649	391	702	937	1845	2976	27	486	413	0
		Annual	36034	26741	26262	9757	14510	13825	7306	1715	11262	2373
24	Wadakbal at Sina	Monsoon	311	868	544	686	284	1872	112	17	222	82
		Non-Monsoon	5	4	24	95	250	264	2	1	3	26
		Annual	316	872	568	781	534	2136	115	18	225	108

Source : SE, Godavari & Krishna Circle, Central Water Commission, Hyderabad.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

V Basin : Krishna												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
25	Wadenapally at Krishna	Monsoon	33718	32201	34258	11360	20318	12426	11330	984	12522	5663
		Non-Monsoon	4137	3678	3971	4397	4529	4693	2257	1806	3315	2055
		Annual	37856	35880	38229	15758	24846	17118	13586	2790	15837	7718
26	Warunji at Koyna	Monsoon	6082	6038	3909	2310	1800	1835	2963	890	2625	1651
		Non-Monsoon	412	394	370	363	237	160	79	0	14	0
		Annual	6493	6432	4279	2673	2037	1995	3042	890	2639	1651
27	Yadgir at Bhima	Monsoon	13254	14062	7084	4616	6669	7156	3662	822	3954	2195
		Non-Monsoon	286	128	542	120	883	896	294	221	374	0
		Annual	13541	14191	7626	4736	7553	8053	3956	1043	4328	2195
28	Byladahalli at Haridra	Monsoon	309	127	126	220	283	395	244	124	327	274
		Non-Monsoon	84	103	39	63	47	258	76	89	26	84
		Annual	393	230	166	283	330	652	321	213	353	358
29	Haralahalli at Tungabhadra	Monsoon	6904	6496	9341	6112	6921	5559	5851	3651	7998	6779
		Non-Monsoon	656	683	891	556	902	1535	633	502	472	490
		Annual	7560	7179	10232	6668	7824	7094	6484	4153	8470	7269
30	Holehonnur at Bhadra	Monsoon	1002	979	2271	1423	1737	1163	1424	676	2074	1630
		Non-Monsoon	453	492	636	840	780	1192	818	783	820	571
		Annual	1456	1471	2907	2262	2517	2355	2242	1460	2895	2201
31	Honnali at Tungabhadra	Monsoon	7161	7536	9995	6949	6881	5327	6486	4334	8791	7064
		Non-Monsoon	841	835	1092	655	893	1401	734	617	803	880
		Annual	8003	8371	11087	7604	7775	6727	7219	4951	9594	7944
32	Hoovinahole at Swarnamukhi	Monsoon	7	1	3	44	38	14	0	0	4	0
		Non-Monsoon	11	1	1	14	5	55	0	0	0	0
		Annual	18	2	4	58	43	69	0	0	4	0
33	Kellodu at Vedavathi	Monsoon	45	1	1	15	64	94	6	1	2	62
		Non-Monsoon	5	1	0	7	7	210	1	0	0	7
		Annual	50	1	1	21	71	305	7	1	2	69
34	Kuppelur at Kumudavathi	Monsoon	460	280	751	389	565	805	317	70	607	582
		Non-Monsoon	15	21	30	17	23	152	72	18	8	27
		Annual	475	301	782	406	588	957	389	88	615	609
35	Marol at Varada	Monsoon	2290	2526	3220	1901	2325	1801	2434	1274	2526	2634
		Non-Monsoon	35	15	200	0	0	265	134	70	96	93
		Annual	2325	2541	3420	1901	2325	2065	2568	1344	2622	2727
36	Shimoga at Tunga	Monsoon	5896	6105	6770	5625	5838	4678	5747	4320	7403	6369
		Non-Monsoon	324	261	533	265	248	385	273	252	309	304
		Annual	6220	6366	7303	5890	6086	5062	6020	4572	7712	6673

Source : SE, Godavari & Krishna Circle, Central Water Commission, Hyderabad.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

VI Basin : Cauvery												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Akkihebbal at	Monsoon	1670	1750	-	-	1143	783	896	344	1202	813
		Non-Monsoon	290	231	-	-	310	435	248	68	122	140
		Annual	1960	1981	-	-	1453	1218	1144	412	1324	953
2	Bendrahalli at Suvarnathi	Monsoon	-	16	-	-	21	49	34	6	24	54
		Non-Monsoon	-	5	-	-	6	20	5	1	3	3
		Annual	-	21	-	-	27	70	39	7	26	57
3	Biligundulu at cauvery	Monsoon	9154	6320	-	-	5171	4292	5647	2088	6610	5291
		Non-Monsoon	1717	1002	-	-	1134	1575	1162	756	738	906
		Annual	10871	7322	-	-	6305	5867	6809	2844	7348	6197
4	Chunchunkatte at Cauvery	Monsoon	-	-	-	-	1842	1584	2073	1269	2581	2190
		Non-Monsoon	-	-	-	-	123	151	89	10	71	148
		Annual	-	-	-	-	1965	1734	2163	1279	2652	2338
5	Hogenakkal at Chinnar	Monsoon	127	4	-	-	1	17	5	1	6	24
		Non-Monsoon	40	1	-	-	1	27	2	0	0	1
		Annual	167	4	-	-	2	44	7	1	6	25
6	K.M.Vadi at Lakhshmanthirtha	Monsoon	542	366	-	-	433	186	353	126	534	288
		Non-Monsoon	22	3	-	-	10	11	2	0	4	8
		Annual	564	368	-	-	442	197	354	126	538	295
7	Kollegal at Cauvery	Monsoon	-	-	-	-	4619	3611	5080	1661	6531	5120
		Non-Monsoon	-	-	-	-	609	946	608	371	407	512
		Annual	-	-	-	-	5228	4557	5688	2032	6938	5632
8	Kudige at Cauvery	Monsoon	7246	6903	-	-	2524	1773	2421	1672	4144	3227
		Non-Monsoon	1638	1212	-	-	167	211	163	111	162	201
		Annual	8884	8115	-	-	2691	1984	2584	1782	4306	3428
9	M.H.Halli at Hemavathi	Monsoon	3078	2900	-	-	882	473	748	419	784	606
		Non-Monsoon	289	116	-	-	254	321	177	202	40	153
		Annual	3367	3017	-	-	1136	794	925	621	824	760
10	Sakleshpur at Hemavathi	Monsoon	635	619	-	-	1193	1088	1118	842	1393	1246
		Non-Monsoon	211	67	-	-	97	119	81	44	77	83
		Annual	846	685	-	-	1290	1207	1199	886	1470	1329
11	T. Bekuppe at Arkavathi	Monsoon	1148	1649	-	-	225	143	169	83	145	115
		Non-Monsoon	102	59	-	-	86	84	81	55	78	107
		Annual	1250	1708	-	-	311	227	250	138	223	222

Source : Water Year Book for 2003-2013 (Cauvery Basin) SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

VI Basin : Cauvery												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
12	T.K.Halli at Shimsa	Monsoon	1055	363	-	-	881	753	497	156	286	269
		Non-Monsoon	279	102	-	-	223	277	147	58	54	81
		Annual	1334	465	-	-	1104	1030	644	214	340	350
13	T.Narasipur at Kabini	Monsoon	2937	2940	-	-	2381	1282	2190	909	2113	2078
		Non-Monsoon	807	304	-	-	328	392	322	200	55	181
		Annual	3743	3245	-	-	2708	1675	2512	1109	2168	2260
14	Thimmanahalli at Yagachi	Monsoon	172	171	-	-	315	325	177	59	136	120
		Non-Monsoon	30	21	-	-	60	69	29	9	23	28
		Annual	202	193	-	-	374	394	206	68	159	148
15	Urachikottai at Cauvery	Monsoon	-	-	-	-	4351	3272	6022	2523	5143	3939
		Non-Monsoon	-	-	-	-	1434	1568	1860	639	1258	1675
		Annual	-	-	-	-	5785	4840	7882	3163	6402	5614
16	Nellithurai at Bhavani	Monsoon	-	-	-	-	2065	1613	1716	833	1902	1249
		Non-Monsoon	-	-	-	-	314	471	602	174	233	348
		Annual	-	-	-	-	2380	2085	2318	1007	2136	1597
17	Thengumarahada at Moyar	Monsoon	-	-	-	-	377	221	191	72	233	180
		Non-Monsoon	-	-	-	-	145	113	120	78	109	130
		Annual	-	-	-	-	521	334	311	150	342	311
18	Savandapur at Bhavani	Monsoon	-	-	-	-	332	391	314	176	234	338
		Non-Monsoon	-	-	-	-	256	252	250	76	123	210
		Annual	-	-	-	-	588	643	564	252	357	548
19	Nallamaranpatty at Amaravathi	Monsoon	-	-	-	-	105	104	122	6	39	134
		Non-Monsoon	-	-	-	-	58	184	67	0	0	16
		Annual	-	-	-	-	163	288	189	6	39	150
20	Kodumudi at Cauvery	Monsoon	-	-	-	-	5065	4061	7154	2826	5212	4256
		Non-Monsoon	-	-	-	-	2196	2549	2667	871	1431	1919
		Annual	-	-	-	-	7261	6609	9820	3697	6644	6176
21	Musiri at Cauvery	Monsoon	-	-	-	-	5569	3884	6465	2315	4947	3522
		Non-Monsoon	-	-	-	-	1378	1871	1862	596	936	1355
		Annual	-	-	-	-	6947	5755	8327	2911	5883	4877
22	Elunuthimangalam at Noyyal	Monsoon	-	-	-	-	83	104	106	5	18	98
		Non-Monsoon	-	-	-	-	50	95	72	3	14	117
		Annual	-	-	-	-	133	200	178	8	32	214
23	Sevanur at Chittar	Monsoon	-	-	-	-	9	3	4	0	4	5
		Non-Monsoon	-	-	-	-	2	3	2	0	2	2
		Annual	-	-	-	-	11	6	7	0	6	7

Source :Cauvery Basin, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

VI Basin : Cauvery												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
24	Thevur at Sarabenga	Monsoon	-	-	-	-	4	24	11	0	6	6
		Non-Monsoon	-	-	-	-	3	5	5	0	3	4
		Annual	-	-	-	-	7	29	16	0	9	10
25	Thoppur at Thoppaiyar	Monsoon	-	-	-	-	0	1	2	0	0	0
		Non-Monsoon	-	-	-	-	0	6	0	0	0	0
		Annual	-	-	-	-	0	7	2	0	0	0
26	Kudlur at Palar	Monsoon	-	-	-	-	14	99	12	6	3	31
		Non-Monsoon	-	-	-	-	3	45	6	0	0	4
		Annual	-	-	-	-	16	144	18	6	3	35
27	Annavaasal at Nattar	Monsoon	-	-	-	-	11	8	22	4	8	9
		Non-Monsoon	-	-	-	-	8	12	10	0	1	7
		Annual	-	-	-	-	18	20	31	4	10	16
28	Peralam at Vanjiyar	Monsoon	-	-	-	-	7	6	12	3	8	7
		Non-Monsoon	-	-	-	-	4	6	3	0	1	2
		Annual	-	-	-	-	11	12	14	4	9	9
29	Menangudi at Noolar	Monsoon	-	-	-	-	32	35	75	20	31	40
		Non-Monsoon	-	-	-	-	23	18	15	0	9	13
		Annual	-	-	-	-	55	53	91	20	41	53
30	Porakudi at Arasalar	Monsoon	-	-	-	-	55	45	71	31	17	33
		Non-Monsoon	-	-	-	-	47	54	38	0	1	11
		Annual	-	-	-	-	101	99	109	31	18	44
31	Thengudi at Thirumalairajanar	Monsoon	-	-	-	-	93	85	95	34	36	48
		Non-Monsoon	-	-	-	-	77	71	41	4	22	27
		Annual	-	-	-	-	169	156	136	38	58	75
32	Gopurajapuram at Puravidaiyanar	Monsoon	-	-	-	-	31	33	42	21	9	33
		Non-Monsoon	-	-	-	-	31	39	17	0	6	4
		Annual	-	-	-	-	62	72	59	21	15	37
33	Nallathur at Nandalar	Monsoon	-	-	-	-	44	37	78	29	17	71
		Non-Monsoon	-	-	-	-	41	47	16	0	8	12
		Annual	-	-	-	-	85	84	94	29	25	84
34	Muthankera at Kabini	Monsoon	-	-	-	-	2166	1650	2414	1288	2998	2851
		Non-Monsoon	-	-	-	-	189	189	97	66	142	183
		Annual	-	-	-	-	2354	1838	2512	1354	3141	3034

Source : Cauvery Basin, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

VII Basin : Pennar												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Nellore at Pennar	Monsoon	1522	-	349	42	122	863	226	36	22	1
		Non-monsoon	652	-	54	16	32	658	91	34	6	8
		Annual	2174	-	402	58	155	1521	317	70	29	9
2	Nandipalli at Sagileru	Monsoon	151	-	289	138	68	144	51	13	98	1
		Non-monsoon	1	-	21	124	38	115	39	10	6	0
		Annual	152	-	310	262	106	259	90	23	105	1
3	Chennur at Pennar	Monsoon	3019	-	4229	1914	2757	3254	2034	554	2833	2597
		Non-monsoon	432	-	576	297	471	1146	414	98	569	136
		Annual	3451	-	4804	2211	3228	4400	2448	652	3401	2734
4	Kamalapuram at Papagni	Monsoon	112	-	20	17	2	11	29	0	128	0
		Non-monsoon	47	-	1	7	0	0	0	0	0	0
		Annual	159	-	20	24	2	11	29	0	128	0
5	Alladupalli at Kunderu	Monsoon	3102	-	2527	683	1700	2310	1622	496	2387	2724
		Non-monsoon	438	-	367	211	392	821	379	143	797	155
		Annual	3540	-	2895	893	2092	3131	2001	639	3184	2879
6	Tadapatri at Pennar	Monsoon	41	-	217	112	35	1	1	2	2	0
		Non-monsoon	0	-	17	13	4	0	0	0	0	0
		Annual	41	-	234	124	39	1	1	2	2	0
7	Nagalamadike at Pennar	Monsoon	0	-	0	8	0	0	0	0	6	0
		Non-monsoon	0	-	0	0	0	0	0	0	0	0
		Annual	0	-	0	8	0	0	0	0	6	0
8	Singavaram at Chitravathi	Monsoon	13	-	0	0	0	0	0	0	0	0
		Non-monsoon	13	-	0	0	0	21	0	0	0	0
		Annual	26	-	0	0	0	21	0	0	0	0

Source : East Flowing Rivers from Mahanadi to Kanyakumari, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

VIII Basin : East Flowing Rivers from Mahanadi to Pennar												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Purushottam-pur	Monsoon	2660	2876	2549	2033	2116	2457	986	1437	4923	2643
		Non-Monsoon	88	36	76	34	82	354	36	62	177	88
		Annual	2748	2912	2624	2067	2198	2811	1022	1500	5100	2731
2	Gunupur	Monsoon	2071	4967	2819	2561	2473	2080	1537	1934	2635	2889
		Non-Monsoon	309	219	257	155	147	299	119	134	333	248
		Annual	2380	5186	3076	2716	2620	2379	1656	2068	2968	3137
3	Kashinagar	Monsoon	2337	6047	3520	2875	2631	2767	1797	2116	3446	4911
		Non-Monsoon	313	374	449	195	176	372	157	152	404	368
		Annual	2650	6422	3969	3070	2807	3139	1954	2268	3849	5279
4	Srikakulam	Monsoon	1761	4388	3331	2573	1920	4841	1511	2365	3169	3731
		Non-Monsoon	157	277	429	209	237	1067	213	230	366	339
		Annual	1918	4665	3760	2782	2157	5908	1724	2595	3535	4070
5	Anakapalli	Monsoon	884	592	1028	301	83	1268	833	1268	657	371
		Non-Monsoon	108	59	123	43	0	436	39	183	86	36
		Annual	992	651	1151	344	83	1704	872	1451	743	407

Source : East Flowing Rivers from Mahanadi to Kanyakumari, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

IX Basin : East Flowing Rivers from Pennar to Kanyakumari		Unit : MCM										
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Naidupeta at Swarnamukhi	Monsoon	397	-	174	142	18	199	61	47	30	3
		Non-monsoon	523	-	236	99	42	142	56	154	19	21
		Annual	920	-	411	241	60	341	117	202	50	24
2	Sulurpet at Kalingi	Monsoon	704	-	189	244	62	70	89	32	12	14
		Non-monsoon	316	-	119	39	15	23	52	103	0	4
		Annual	1019	-	308	283	76	93	141	135	12	18
3	Chengalpet at Palar	Monsoon	133	-	36	99	25	38	46	7	5	2
		Non-monsoon	331	-	127	66	25	138	49	7	1	0
		Annual	464	-	163	165	50	176	96	14	7	2
4	Magaral at Cheyyar	Monsoon	47	-	0	29	0	0	7	1	0	0
		Non-monsoon	267	-	36	20	0	54	9	1	0	0
		Annual	314	-	36	49	0	54	17	2	0	0
5	Arcot at Palar	Monsoon	112	-	0	0	0	1	0	0	0	0
		Non-monsoon	75	-	4	0	0	5	0	0	0	0
		Annual	187	-	4	0	0	6	0	0	0	0
6	Kumarapalayam at Varahanadi	Monsoon	0	-	0	55	7	100	41	14	0	0
		Non-monsoon	31	-	7	26	6	238	101	0	0	0
		Annual	31	-	7	81	13	338	142	14	0	0
7	Villupuram at Ponnaiyar	Monsoon	1169	-	0	86	3	139	39	21	0	0
		Non-monsoon	686	-	208	125	3	255	79	0	0	0
		Annual	1855	-	208	211	6	394	119	21	0	0
8	Vazhavachanur at Ponnaiyar	Monsoon	782	-	0	23	24	147	40	25	6	2
		Non-monsoon	471	-	83	147	114	244	167	30	4	23
		Annual	1253	-	83	170	138	391	208	55	10	25
9	Gummanur at Ponnaiyar	Monsoon	-	-	141	239	160	142	163	62	220	225
		Non-monsoon	-	-	71	72	56	63	54	37	46	113
		Annual	-	-	212	311	216	205	218	99	266	338
10	Kudalaiyathur at Vellar	Monsoon	-	-	33	316	78	377	232	22	2	3
		Non-monsoon	-	-	173	168	128	665	213	0	0	0
		Annual	-	-	206	484	206	1042	445	22	3	3
11	Avarankuppam at Palar	Monsoon	-	-	2	14	13	7	9	1	0	0
		Non-Monsoon	-	-	2	4	1	4	1	0	0	0
		Annual	-	-	4	18	14	11	9	1	0	0
12	Theni at Suruliyar	Monsoon	-	-	632	429	268	359	510	137	436	396
		Non-Monsoon	-	-	306	80	125	216	220	20	59	257
		Annual	-	-	939	509	392	576	731	158	495	652
13	Murappanadu at Tambraparani	Monsoon	-	-	211	316	221	156	204	52	233	254
		Non-Monsoon	-	-	537	375	242	190	155	121	166	371
		Annual	-	-	748	691	463	346	359	173	399	625
14	A.P.Puram at Chittar	Monsoon	-	-	1	1	27	0	2	0	0	1
		Non-Monsoon	-	-	63	2	2	0	1	0	2	3
		Annual	-	-	64	3	29	0	3	0	2	4
15	Paramakudi at Vaigai	Monsoon	-	-	42	49	3	20	11	0	0	11
		Non-Monsoon	-	-	138	12	13	46	15	0	0	5
		Annual Flow	-	-	180	61	16	66	26	0	0	15
16	Irrukkankudi at Vaippar	Monsoon	-	-	1	14	0	4	1	0	0	0
		Non-Monsoon	-	-	16	4	0	12	5	0	0	0
		Annual	-	-	18	18	0	17	6	0	0	0
17	Ambasamudram at Vaigai	Monsoon	-	-	45	43	31	29	71	6	1	26
		Non-Monsoon	-	-	150	18	17	35	29	0	2	14
		Annual	-	-	195	61	48	64	100	6	3	40

Source : East Flowing Rivers from Mahanadi to Kanyakumari, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

X Basin : Narmada												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Orsang at Chandawada	Monsoon	1289	2733	2143	807	323	793	1087	1411	584	694
		Non-Monsoon	0	4	33	132	0	15	17	28	16	13
		Annual	1289	2737	2176	939	323	808	1104	1439	601	708
2	Narmda at Garudeswar	Monsoon	20239	26499	20342	3126	5409	6594	6594	20423	44917	7246
		Non-Monsoon	4895	5364	3660	1312	1342	1701	1701	2080	4212	1691
		Annual	25134	31864	24002	4438	6745	8295	8295	22503	49129	8937
3	Hathni at Jobat	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
4	Goi at Pati	Monsoon	-	-	-	-	238	624	415	257	584	327
		Non-Monsoon	-	-	-	-	46	60	0	0	16	13
		Annual	-	-	-	-	284	684	415	258	601	339
5	Uri at Dhulsar	Monsoon	-	-	-	-	38	129	602	160	316	179
		Non-Monsoon	-	-	-	-	1	1	1	0	3	0
		Annual	-	-	-	-	39	130	603	160	319	179
6	Narmada at Rajghat	Monsoon	24241	17150	-	-	-	-	-	-	-	0
		Non-Monsoon	9071	6900	-	-	-	-	-	-	-	0
		Annual	33312	24051	-	-	-	-	-	-	-	0
7	Narmada AT Mandleswar	Monsoon	26182	23976	15089	7178	12839	14423	33194	32516	51905	11947
		Non-Monsoon	8058	9749	9665	9322	15227	14038	-	12985	13137	12853
		Annual	34240	33724	24754	16500	28066	28461	44849	45501	65042	24799
8	Kundi at Kogaon	Monsoon	112	1871	987	163	539	1463	1039	608	1407	1434
		Non-Monsoon	0	10	6	0	87	78	0	5	24	34
		Annual	112	1881	994	163	626	1531	1040	613	1431	1468
9	Chhota Tawa at Ginnore	Monsoon	0	0	-	-	-	-	-	-	-	-
		Non-Monsoon	0	0	-	-	-	-	-	-	-	-
		Annual	0	0	-	-	-	-	-	-	-	-

Source SE(C),Govt. of India, CWC, Office of the Chief Eng., Narmada Basin Oraganistion, Bhopal (MP).

Contd/-

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

X Basin : Narmada												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
10	Narmada at Motakka	Monsoon	17582	21782	-	-	-	-	-	-	-	-
		Non-Monsoon	10571	10973	-	-	-	-	-	-	-	-
		Annual	28153	32755	-	-	-	-	-	-	-	-
11	Narmada at Handia	Monsoon	26196	21324	11948	9489	15616	12765	23945	23291	39445	10053
		Non-Monsoon	4838	3847	4241	5090	3376	41153	4428	3197	4554	4491
		Annual	31034	25170	16188	14579	18992	16918	28373	26488	43999	14544
12	Ganjal at Chhidgaon	Monsoon	615	1454	1468	309	796	717	921	2129	2448	725
		Non-Monsoon	26	34	32	8	66	49	26	43	50	85
		Annual	642	1488	1500	317	862	766	947	2172	2498	810
13	Narmada at Hoshangabad	Monsoon	25058	15939	8661	8186	11246	9387	21516	18095	34505	8726
		Non-Monsoon	3968	4209	3673	3900	2584	3483	3754	2983	4039	3572
		Annual	29026	20148	12334	12086	13830	12870	25270	21078	38544	12298
14	Tawa at Tawakati	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
15	Machna at Shapur	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
16	Narmada at Sandia	Monsoon	19737	10028	5779	6503	-	6538	19006	10877	24760	7130
		Non-Monsoon	4136	3837	3353	3207	1909	2575	3348	2713	3891	3731
		Annual	23873	13865	9132	9711	11272	9113	22354	13590	28651	10861
17	Shakkar at Gadarwara	Monsoon	1458	2216	1573	746	2058	1275	1257	2116	2833	1002
		Non-Monsoon	50	62	19	36	94	43	25	25	107	44
		Annual	1508	2278	1592	782	2192	1318	1282	2140	2941	1046
18	Narmada at Barmanghat	Monsoon	16754	6092	3341	5608	4005	5725	14990	7809	19072	5839
		Non-Monsoon	3818	3000	2730	2795	1113	2064	2846	2494	3256	2923
		Annual	20572	9092	6071	8403	5718	7789	17836	10302	22327	8762

Source SE(C),Govt. of India, CWC, Office of the Chief Eng., Narmada Basin Oraganistion, Bhopal (MP).

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

X Basin : Narmada												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
19	Sher at Belkheri	Monsoon	694	1135	428	296	470	595	659	634	1236	511
		Non-Monsoon	18	15	8	6	23	11	6	14	49	16
		Annual	711	1151	436	302	493	605	666	648	1285	527
20	Hiran at Patan	Monsoon	2805	484	531	1497	426	1656	2785	1260	3421	818
		Non-Monsoon	151	141	43	69	111	89	132	159	153	114
		Annual	2956	625	574	1565	838	1746	2898	1419	3574	932
21	Banjar at Bamni	Monsoon	1342	670	546	484	247	460	707	476	1260	743
		Non-Monsoon	89	28	22	8	23	17	38	56	116	112
		Annual	1432	698	568	492	270	477	745	532	1376	856
22	Narmada at Jamtara	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
23	Banjar at Hridayanagar	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
24	Burhner at Mohgaon	Monsoon	3510	2171	1433	1236	571	1952	3242	2020	2944	1957
		Non-Monsoon	101	75	69	56	67	62	142	106	216	169
		Annual	3610	2246	1502	1293	638	2014	3385	2126	3161	2126
25	Narmada at Amgaon	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
26	Narmada at Manot	Monsoon	4629	2668	1298	2092	1109	1918	3711	2012	2580	2422
		Non-Monsoon	140	159	97	83	114	106	166	165	294	288
		Annual	4769	2827	1395	2174	1223	2023	3877	2177	2874	2710
27	Narmada at Dindori	Monsoon	1577	1138	560	766	500	717	1592	1013	1527	1286
		Non-Monsoon	113	98	72	112	87	49	120	71	145	131
		Annual	1690	1236	632	878	588	766	1711	1083	1673	1417

Source SE(C),Govt. of India, CWC, Office of the Chief Eng., Narmada Basin Oraganistion, Bhopal (MP).

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XI Basin : Tapi												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Gidhade	Monsoon	4263	14867	9055	3551	3573	5909	4562	8061	10886	367
		Non-Monsoon	5	105	233	0	0	0	0	0	0	0
		Annual	4268	14972	9288	3551	3573	5909	4562	8061	10886	367
2	Purna at Gopalkheda	Monsoon	618	1956	2729	210	270	1369	600	1351	2313	88
		Non-Monsoon	10	30	98	1	24	31	0	8	61	2
		Annual	629	1986	2827	211	295	1400	601	1359	2374	90
3	Purna at Yerli	Monsoon	1024	3480	3298	364	578	2374	854	1823	3755	131
		Non-Monsoon	16	38	42	1	62	53	1	8	66	3
		Annual	1041	3518	3340	365	640	2426	855	1832	3822	134
4	Sarangkheda	Monsoon	5038	17388	11355	3443	3071	7001	6202	8298	12353	293
		Non-Monsoon	4	99	59	0	0	0	0	0	0	0
		Annual	5043	17486	11414	3443	3071	7001	6202	8298	12353	293
5	Tapi at Burhanpur	Monsoon	3286	4838	9708	2259	1806	3874	5003	7949	8728	387
		Non-Monsoon	56	67	89	48	222	109	36	84	198	4
		Annual	3342	4905	9797	2307	2028	3983	5039	8033	8925	391

Source: SE, Tapi Division, CWC, Gandhi Nagar.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XII Basin : West Flowing Rivers from Tapi to Tadri												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Santeguli at Aghanashini	Monsoon	3902	4551	-	-	3021	2609	3291	2436	3627	3219
		Non-monsoon	70	79	-	-	92	89	73	65	78	87
		Annual	3972	4630	-	-	3112	2698	3364	2501	3706	3306

Source : West Flowing Rivers from Kanyakumari to Tapi, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Addoor at Gurpur	Monsoon	2206	2655	-	-	2527	2667	2710	1879	2520	2024
		Non-monsoon	70	0	-	-	0	6	15	0	0	0
		Annual	2276	2655	-	-	2527	2672	2725	1879	2520	2024
2	Avershe at Sita	Monsoon	1086	1269	-	-	1316	1329	1454	1090	1228	1151
		Non-monsoon	26	22	-	-	26	34	13	10	19	21
		Annual	1112	1291	-	-	1341	1364	1468	1099	1248	1172
3	Bantwal at Netravathi	Monsoon	12105	13562	-	-	11805	11660	11930	9245	13006	10716
		Non-monsoon	209	82	-	-	102	306	221	42	165	152
		Annual	12314	13644	-	-	11907	11966	12152	9287	13171	10868
4	Haladi at Haladi	Monsoon	1530	1865	-	-	1828	1535	1953	1599	1791	1643
		Non-monsoon	323	490	-	-	535	423	549	548	517	491
		Annual	1853	2354	-	-	2362	1958	2502	2148	2308	2134
5	Yennehole at Yennehole	Monsoon	1299	1454	-	-	1664	1393	1698	1173	1739	1496
		Non-monsoon	33	23	-	-	39	44	21	18	15	22
		Annual	1332	1477	-	-	1703	1437	1719	1191	1754	1518
6	Arangaly at Chalakudy	Monsoon	-	-	-	-	1717	1499	2016	925	2589	1997
		Non-monsoon	-	-	-	-	72	115	21	7	57	159
		Annual	-	-	-	-	1789	1614	2037	932	2646	2155
7	Ashramam at Pazhayar	Monsoon	-	-	-	-	76	99	71	14	30	71
		Non-monsoon	-	-	-	-	3	69	27	0	22	36
		Annual	-	-	-	-	78	167	98	14	52	108
8	Ayilam at Vamanapuram	Monsoon	-	-	-	-	384	896	409	38	435	523
		Non-monsoon	-	-	-	-	96	119	98	0	44	57
		Annual	-	-	-	-	480	1014	506	38	479	579
9	Erinjipuzha at Payaswani	Monsoon	-	-	-	-	1931	2259	2695	1633	1633	2524
		Non-monsoon	-	-	-	-	91	93	87	61	61	95
		Annual	-	-	-	-	2022	2353	2782	1694	1694	2619
10	Kalampur at Kaliyar	Monsoon	-	-	-	-	861	1147	1044	713	1488	1404
		Non-monsoon	-	-	-	-	40	20	12	6	46	64
		Annual	-	-	-	-	902	1167	1056	719	1534	1468
11	Kallooppara at Manimala	Monsoon	-	-	-	-	1272	1953	1608	841	2115	2032
		Non-monsoon	-	-	-	-	187	183	176	20	153	238
		Annual	-	-	-	-	1459	2136	1784	861	2268	2271

Source : West Flowing Rivers from Kanyakumari to Tapi, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
12	Karathodu at Kadalundi	Monsoon	-	-	-	-	1356	1226	1418	619	1653	1838
		Non-monsoon	-	-	-	-	43	56	19	0	18	16
		Annual	-	-	-	-	1399	1282	1437	619	1671	1854
13	Kidangoor at Meenachil	Monsoon	-	-	-	-	1174	1788	1613	1021	2207	2023
		Non-monsoon	-	-	-	-	129	214	102	25	141	232
		Annual	-	-	-	-	1303	2003	1715	1045	2348	2255
14	Kumbidi at Bharathapuzha	Monsoon	-	-	-	-	4707	4642	5503	2198	5821	6009
		Non-monsoon	-	-	-	-	201	453	239	47	187	331
		Annual	-	-	-	-	4908	5094	5741	2245	6008	6340
15	Kuniyil at Chaliyar	Monsoon	-	-	-	-	4433	3755	5016	2819	5743	4616
		Non-monsoon	-	-	-	-	44	115	89	0	70	0
		Annual	-	-	-	-	4477	3870	5105	2819	5814	4616
16	Kuttyadi at Kuttyadi	Monsoon	-	-	-	-	1276	954	1281	827	1706	1426
		Non-monsoon	-	-	-	-	145	114	109	70	102	131
		Annual	-	-	-	-	1421	1068	1390	897	1807	1557
17	Kuzhithurai at Thambraparni	Monsoon	-	-	-	-	3	118	4	0	0	33
		Non-monsoon	-	-	-	-	0	164	0	0	0	119
		Annual	-	-	-	-	3	283	4	0	0	152
18	Malakkara at Pamba	Monsoon	-	-	-	-	2718	4128	3288	1715	4253	3630
		Non-monsoon	-	-	-	-	569	450	304	7	297	408
		Annual	-	-	-	-	3287	4578	3593	1722	4550	4039
19	Mankara at Bharathapuzha	Monsoon	-	-	-	-	685	522	899	233	780	884
		Non-monsoon	-	-	-	-	45	121	68	19	41	145
		Annual	-	-	-	-	730	643	967	252	821	1029
20	Neeleswaram	Monsoon	-	-	-	-	5889	5961	5976	3758	8520	6705
		Non-monsoon	-	-	-	-	797	1548	1513	201	871	1327
		Annual	-	-	-	-	6686	7509	7489	3960	9391	8033
21	Pattazhy at Kallada	Monsoon	-	-	-	-	495	1782	982	464	1272	1243
		Non-monsoon	-	-	-	-	617	691	442	100	467	449
		Annual	-	-	-	-	1112	2473	1425	564	1739	1692
22	Perumannu at Valapatnam	Monsoon	-	-	-	-	3474	3092	3958	2829	5268	4542
		Non-monsoon	-	-	-	-	129	155	116	66	106	113
		Annual	-	-	-	-	3603	3248	4074	2894	5374	4655
23	Pudur at Kannadipuzha	Monsoon	-	-	-	-	368	246	311	102	305	390
		Non-monsoon	-	-	-	-	23	83	43	4	16	77
		Annual	-	-	-	-	391	328	354	106	321	467

Source : West Flowing Rivers from Kanyakumari to Tapi, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

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Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
24	Pulamanthole at Pulanthodu	Monsoon	-	-	-	-	1720	2022	2150	869	2030	1956
		Non-monsoon	-	-	-	-	85	151	88	37	46	95
		Annual	-	-	-	-	1805	2174	2237	906	2077	2051
25	Ramamangalam at Muvattupuzha	Monsoon	-	-	-	-	3385	4137	4199	2743	5316	4213
		Non-monsoon	-	-	-	-	1232	1609	1427	436	1327	1228
		Annual	-	-	-	-	4616	5745	5627	3178	6643	5441
26	Thumpamon at Achankovil	Monsoon	-	-	-	-	660	1238	880	400	1225	1158
		Non-monsoon	-	-	-	-	94	162	95	5	165	110
		Annual	-	-	-	-	754	1400	975	406	1390	1269
27	Vandiperiyar at Periyar	Monsoon	-	-	-	-	123	127	144	62	190	135
		Non-monsoon	-	-	-	-	5	12	12	2	10	10
		Annual	-	-	-	-	128	138	156	64	200	145
28	Ambarampalayam at Chalakudy	Monsoon	-	-	-	-	296	238	243	109	182	209
		Non-monsoon	-	-	-	-	131	188	169	104	148	169
		Annual	-	-	-	-	428	426	413	213	330	378

Source : West Flowing Rivers from Kanyakumari to Tapi, SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XIV Basin : Mahi												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Chakaliya at Anas	Monsoon	1125	4864	1884	525	400	454	614	1228	1260	704
		Non-Monsoon	0	25	44	6	1	3	2	0	153	52
		Annual	1125	4889	1927	531	401	458	616	1228	1413	756
2	Dhariawad at Jakham	Monsoon	106	1124	94	126	95	98	911	539	774	37
		Non-Monsoon	18	21	26	24	10	15	26	24	40	22
		Annual	124	1144	120	150	106	114	937	562	814	59
3	Khanpur at Mahi	Monsoon	2206	21276	6290	505	367	926	4787	6813	8225	1825
		Non-Monsoon	572	604	447	363	186	152	228	226	562	379
		Annual	2779	21880	6737	868	553	1078	5014	7039	8787	2204
4	Mataji at Mahi	Monsoon	1016	4035	2136	274	1055	606	2999	2218	3337	661
		Non-Monsoon	3	20	24	4	12	17	3	12	150	43
		Annual	1019	4055	2160	278	1067	623	3001	2230	3488	704
5	Paderdibadi at Mahi	Monsoon	831	10821	1514	297	454	364	3458	2811	2729	1206
		Non-Monsoon	100	126	87	17	98	42	319	138	274	153
		Annual	930	10946	1600	314	552	407	3777	2949	3003	1360
6	Sapawada at Rupen	Monsoon	230	223	200	70	5	80	29	0	77	4
		Non-Monsoon	0	0	0	0	14	0	0	0	1	0
		Annual	230	223	200	70	19	81	29	0	78	4
7	Rangeli at Som	Monsoon	485	3096	216	210	332	146	1138	889	1792	644
		Non-Monsoon	32	49	48	19	37	70	160	64	168	110
		Annual	517	3146	264	229	370	217	1299	952	1960	754

Source: Superintending Engineer, Mahi Division, CWC, Gandhi Nagar.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XV Basin : Sabarmati												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Derol Bridge at Sabarmati	Monsoon	152	2861	692	26	14	32	326	50	61	38
		Non-Monsoon	6	4	0	0	0	0	0	0	0	0
		Annual	157	2864	693	26	14	32	326	50	61	38
2	Kheroj at Sabarmati	Monsoon	460	1115	498	128	121	424	599	234	143	166
		Non-Monsoon	8	7	6	0	0	38	37	3	8	0
		Annual	468	1122	504	128	121	462	636	237	151	166
3	Voutha at Sabarmati	Monsoon	3697	5909	4651	816	569	933	2346	1620	2897	1363
		Non-Monsoon	447	630	948	475	345	334	732	274	754	468
		Annual	4144	6539	5599	1291	914	1267	3078	1894	3651	1831
4	Kotra (Jotasan) at Wakal	Monsoon	370	1062	329	104	62	178	211	108	136	187
		Non-Monsoon	0	19	6	0	0	7	10	13	33	3
		Annual	370	1081	334	104	62	185	220	121	169	190
5	Gadvel (Ratanpur) at Watrak	Monsoon	334	1710	527	51	44	146	329	149	263	81
		Non-Monsoon	45	21	14	1	0	0	0	5	15	3
		Annual	379	1731	542	52	44	146	329	155	277	85
6	Kheda at Watrak	Monsoon	868	2511	895	89	63	150	356	230	343	131
		Non-Monsoon	4	87	23	0	0	0	1	0	2	0
		Annual	872	2598	918	89	63	150	357	230	345	131

Source: Superintending Engineer, Mahi Division, CWC, Gandhi Nagar.

Table 5 : Sitewise Monsoon, Non-Monsoon & Annual flow of water from 2005-06 to 2014-15

XVI Basin : WFR of Kutch, Saurashtra Including Luni												Unit : MCM
SNo	Site Name	Season	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Chitrasani at Balaram	Monsoon	6	102	47	4	5	26	123	17	29	9
		Non-Monsoon	0	1	0	0	0	0	0	1	0	0
		Annual	6	103	47	4	5	26	123	18	29	9
2	Abu Road at Banas	Monsoon	52	492	188	10	14	42	252	147	60	9
		Non-Monsoon	0	3	1	0	0	0	4	2	1	0
		Annual	52	496	190	10	14	42	257	149	61	9
3	Kamalpur at Banas	Monsoon	11	551	214	18	22	76	96	111	102	88
		Non-Monsoon	0	0	0	0	21	2	0	7	3	6
		Annual	11	551	214	18	43	78	96	117	104	94
4	Sarotry at Banas	Monsoon	112	710	324	16	6	72	513	248	108	57
		Non-Monsoon	0	9	1	0	0	0	10	5	6	0
		Annual	112	720	325	16	6	72	523	253	115	57
5	Ganod at Bhadar	Monsoon	251	795	2032	788	200	703	615	0	1078	0
		Non-Monsoon	0	0	20	12	1	0	16	0	11	0
		Annual	252	795	2052	800	201	703	632	0	1089	0
6	Balotra at Luni	Monsoon	0	98	179	0	0	0	0	0	0	0
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	0	98	179	0	0	0	0	0	0	0
7	Gandhav at Luni	Monsoon	0	0	227	0	0	0	0	0	0	0
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	0	0	227	0	0	0	0	0	0	0
8	Gungan at Machhu	Monsoon	431	112	613	284	7	573	634	0	118	14
		Non-Monsoon	0	0	0	4	0	0	0	0	1	0
		Annual	431	112	613	289	7	573	634	0	119	14
9	Lowara at Shetrunji	Monsoon	1054	629	1266	1055	177	564	504	54	423	127
		Non-Monsoon	1	0	4	7	0	8	1	0	3	0
		Annual	1055	629	1269	1061	177	572	506	54	426	127

Source: Superintending Engineer, Mahi Division, CWC, Gandhi Nagar.

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

I Basin: Mahanadi												Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Andhiyarkore	258.93	09/08/1979	694.64	253.20	10/06/2013	0.00	13/09/1998	851.98	14/10/2009	0.02	1977-2015
2	Bamnidih	228.88	22/08/1975	9583.00	224.28	04/07/2014	4.28	22/08/1975	9583.00	10/05/1980	0.86	1971-2015
3	Baronda	289.33	18/09/1980	6250.00	283.00	09/05/2003	0.00	07/08/2007	6593.80	01/05/1987	0.00	1977-2015
4	Basantpur	219.32	20/09/1980	22500.00	195.87	01/06/1971	18.90	30/08/2003	33087.95	22/05/1975	0.97	1971-2015
5	Ghatora	253.40	21/07/1994	2281.00	246.01	24/11/2013	12.79	21/07/1994	2281.00	25/04/2002	0.00	1979-2015
6	Jondhra	230.57	14/07/1994	8533.00	218.29	13/09/1979	46.60	20/09/1980	11033.30	01/06/1993	0.02	1979-2015
7	Kantamal	132.70	19/09/2008	20000.00	101.78	19/06/1972	0.10	28/07/1992	16263.00	20/04/1987	0.01	1971-2015
8	Kesinga	178.50	04/07/2006	21192.00	167.73	22/05/2009	18.16	28/07/1992	17568.00	02/04/1988	0.02	1978-2015
9	Kotni	279.61	12/07/1994	5269.00	268.00	27/05/1987	0.00	12/07/1994	5269.00	01/07/2013	0.00	1978-2015
10	Kurubhata	220.28	18/07/1995	2200.00	215.21	28/06/2010	0.27	18/07/1995	2200.00	26/04/1980	0.02	1978-2015
11	Manendragarh	420.44	12/07/1990	2088.00	411.00	23/05/2014	0.00	12/07/1990	2088.00	06/04/1996	0.00	1989-2015
12	Pathardih	279.63	01/07/2007	908.99	271.85	12/06/2001	0.50	29/07/1992	1618.00	08/07/2013	0.00	1989-2015
13	Rajim	282.68	30/08/1994	8017.00	275.00	04/01/2012	0.00	21/07/1976	9954.13	29/04/1975	0.00	1971-2015
14	Rampur	229.66	29/08/2003	10958.38	219.48	31/01/1972	0.20	29/08/2003	10958.38	31/05/1972	0.00	1971-2015
15	Salebhata	139.58	29/08/2003	7916.00	130.00	11/06/2013	0.00	30/08/1982	14545.00	17/05/1975	0.00	1971-2015
16	Seorinarayan	224.31	30/08/2003	22800.00	211.67	13/06/1997	0.58	30/08/2003	22800.00	26/04/2014	0.00	1985-2015
17	Simga	257.59	13/07/1994	10821.00	245.68	13/05/2002	0.02	02/07/2007	11331.68	14/05/2002	0.01	1971-2015
18	Sundergarh	222.60	23/06/1996	6341.00	216.17	26/05/2002	0.95	11/09/1998	10404.00	14/04/2007	0.01	1977-2015
19	Tikarpara	74.57	10/09/2011	30400.00	53.33	19/05/1973	131.30	29/08/1978	30862.50	22/12/1988	22.74	1972-2015

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

II Basin : Subernarekha												Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Adityapur	137.56	20/08/1975	6415.80	123.250	03/03/1973	1.90	20/08/1975	6415.80	30/11/1972	0.00	1971-2015
2	Ghatsila	85.05	17/08/1974	9579.59	46.020	20/04/1972	3.80	06/08/1997	10582.00	12/03/2010	0.40	1971-2015
3	Govindpur	9.24	14/10/2013	1620.00	0.600	29/04/2010	0.54	18/06/2008	2885.94	31/01/1997	0.06	1992-2015
4	Jamshedpur	126.26	03/09/1973	7673.89	113.720	06/04/1976	1.30	21/08/2013	8769.78	06/06/1972	0.00	1972-2015
5	Muri	237.50	24/09/2006	428.20	233.100	26/05/2013	0.00	07/09/1991	431.30	26/05/2010	0.00	1989-2015

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

III Basin : Brahmani & Baitarani												Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Altuma	50.15	21/07/2009	892.68	45.54	30/06/2014	0.62	06/08/1997	922.32	25/06/2005	0.16	1990-2015
2	Gomlai	147.27	20/08/2007	10794.57	138.27	24/03/2011	5.16	24/09/2011	10801.19	17/05/1982	1.11	1979-2015
3	Jaraikela	194.63	24/09/2011	3397.55	185.31	22/11/1972	25.20	06/08/1997	12539.00	10/05/1980	0.41	1972-2015
4	Jenapur	23.73	26/09/2011	10372.06	15.92	10/05/1980	4.88	26/09/2011	10372.06	10/05/1980	4.88	1979-2015
5	Panposh	181.44	24/09/2011	10947.00	170.99	18/04/2006	8.01	26/07/1996	11011.00	15/02/2011	6.48	1996-2015
6	Tilga	378.63	28/08/1987	2830.30	373.30	13/06/2012	0.33	28/08/1987	2830.30	10/05/2008	0.00	1979-2015
7	Anandpur	68.14	18/06/2008	6328.00	28.008	10/03/2013	0.01	19/08/1975	10393.90	11/05/1989	0.50	1972-2015
8	Champua	378.95	23/09/2011	1705.20	366.650	19/05/1991	3.64	23/09/2011	1705.20	24/05/2013	0.43	1990-2015

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

IV Basin : Godavari														Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge			Minimum Observed Discharge			Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Discharge (Cumecs)	Date	Water Level (m)	Discharge (Cumecs)	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Ambabal	542.45	05/07/2006	2243.15	534.00	01/06/2008	0.00	539.82	1039.48	04/08/2006	Many days dry bed		07/05/2008	12/1988 to 05/2015
2	Betmogra	356.20	16/10/2005	1211.94	347.50	30/11/2014	0.00	355.72	1128.64	02/10/2001	Many days dry bed		10/04/2009	06/1997 to 05/2015
3	Bhathkeda	581.75	16/10/1998	1838.55	94.50	28/08/1995	0.00	578.59	901.45	26/08/2000	95.370	0.000	29/07/1991	06/1989 to 04/2006
4	Bhadrachalam	50.96	03/08/2013	49187.79	32.77	02/05/2010	0.35	48.45	42755.22	10/08/2007	32.780	0.505	01/05/2010	06/2007 to 05/2015
5	Cherribeda	573.90	04/07/2006	2485.29	564.40	08/06/2014	0.00	569.90	579.83	13/09/2005	Many days dry bed		24/05/2011	03/1996 to 05/2015
6	Chindnar	340.10	05/07/2006	13350.59	327.53	26/05/1975	5.63	339.16	12223.00	24/07/1995	329.640	0.015	02/06/2008	06/1971 to 05/2015
7	Degloor	363.85	24/08/2000	2732.23	352.00	29/04/2009	0.00	363.85	2732.23	24/08/2000	Many days dry bed		06/02/2010	08/1984 to 05/2015
8	Dhalegaon	399.86	13/08/2006	7651.87	386.25	08/09/2011	0.00	398.07	6732.00	25/07/1989	386.675	0.000	18/04/2009	01/1964 to 05/2015
9	G.R.Bridge	378.37	14/08/2006	6221.64	364.01	09/02/2003	0.00	375.80	4763.62	25/08/2000	365.520	0.000	20/06/2009	06/1976 to 05/2015
10	Gandlapet	317.90	30/08/1990	1656.00	311.30	13/01/2008	0.00	317.90	1656.00	30/08/1990	Many days dry bed		23/01/2010	07/1986 to 05/2015
11	Ghargaon	607.84	28/07/2003	1592.48	81.15	20/04/1994	0.00	607.84	1592.48	28/07/2003	Many days dry bed		30/01/2003	06/1989 to 05/2006
12	Injaram	49.93	17/08/1986	14844.51	36.24	02/06/1966	5.54	48.21	10266.70	14/08/1986	36.277	3.9	27/05/1966	01/1964 to 05/2011
13	Jagdulpur	544.55	15/08/1986	3109.41	532.64	12/07/1965	11.57	543.18	2499.10	22/07/1976	534.461	0.000	24/12/2012	08/1964 to 05/2015
14	Koida	47.12	17/08/1986	70792.94	13.92	07/06/1988	85.10	41.24	57978.30	15/08/1983	14.13	53.179	31/05/2003	02/1976 to 05/2011
15	Konta	50.13	16/08/1986	14350*	30.70	15/05/1967	23.81	43.17	10414.37	04/10/1968	39.220	0	07/08/2013	02/1964 to 05/2015
16	Kosagumda	556.15	20/08/2001	893.53	547.65	10/06/2007	0.08	552.57	498.92	28/07/2004	548.050	0	22/03/2012	11/1996 to 05/2015
17	Mancherial	137.85	12/08/1983	29530.62	124.46	04/05/2010	0.00	136.88	24900.00	25/07/1989	Many days dry bed		19/05/2010	03/1964 to 05/2015
18	Murthahandi	545.09	06/08/2010	1882.00	533.77	06/04/2015	0.83	543.93	1553.63	29/07/1992	533.770	0.734	07/04/2015	02/1979 to 05/2015
19	Nowragpur	560.64	29/07/1969	2163.79	549.84	01/05/1999	0.00	558.94	2609.92	07/07/1973	550.025	0.000	20/05/2013	06/1965 to 05/2015
20	Pachegaon	481.58	26/08/1997	1363.00	470.00	09/08/2008	0.00	476.98	1441.04	07/08/2006	Many days dry bed		02/03/2009	12/1978 to 05/2015
21	Pathagudem	103.50	05/08/2006	35392.09	86.08	12/06/2003	0.00	101.96	24862.36	21/07/1976	86.150	0.000	04/06/2009	07/1964 to 05/2015
22	Perur	87.42	15/08/1986	62889.13	68.49	10/06/1966	15.89	85.08	57244.90	02/08/2013	69.41	2.557	14/06/2012	03/1964 to 05/2015
23	Polavaram	28.02	16/08/1986	57310.57	12.08	12/05/1973	70.00	24.71	47248.88	10/08/2007	12.267	25	30/05/1966	06/1966 to 05/2015
24	Potteru (Seasonal)	131.99	04/08/2006	3331.49	121.48	02/06/1997	0.01	125.46	542.80	28/08/1997	121.480	0.013	02/06/1997	03/1989 to 11/2014
25	Purna	371.80	27/07/2005	10811.40	358.00	19/04/2006	0.01	369.54	6133.28	24/07/1989	Many days dry bed		22/06/2011	06/1968 to 05/2015
26	Saigaon	554.44	17/08/1990	2697.28	542.72	20/07/2008	0.00	554.25	3395.20	07/10/1983	Many days dry bed		06/01/2009	08/1964 to 05/2015
27	Sangam	58.25	21/09/2005	970.63	51.00	08/04/2015	0.00	56.07	410.79	24/07/2004	Many days dry bed		03/02/2010	06/1996 to 05/2015
28	Saradaput	239.53	04/08/2006	6480.38	224.65	23/05/1975	6.20	236.69	7052.35	14/08/1986	225.067	5.133	09/06/1977	01/1968 to 05/2015
29	Somanpally (Seasonal)	127.34	24/07/1989	3360.23	118.34	10/06/1967	0.07	126.34	3457.00	21/07/1976	Many days dry bed		14/06/2009	07/1964 to 11/2014
30	Sonarpal	542.57	04/07/2006	1509.19	534.10	12/04/2002	0.00	539.59	729.30	21/09/2006	534.64	0.000	25/03/2009	07/1989 to 05/2015
31	Tumnar	325.98	14/06/2004	3584.01	316.94	27/05/2008	0.39	322.62	1179.32	21/08/2001	317.273	0.000	13/04/2015	03/1989 to 05/2015
32	Yelli	354.20	07/08/2006	12534.57	334.30	07/03/2009	0.00	351.10	9515.40	13/08/1983	Many days dry bed		26/03/2010	06/1976 to 05/2015
33	Zari	385.71	27/07/2005	2470.51	373.00	25/10/2014	0.00	382.73	1474.00	03/09/1992	Many days dry bed		21/03/2010	07/1986 to 05/2015

Source : SE, Godavari Circle, Central Water Commission, Hyderabad, Wainganga Division, Nagpur(2014-15).

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

V Basin : Krishna														Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge			Minimum Observed Discharge			Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Discharge (Cumecs)	Date	Water Level (m)	Discharge (Cumecs)	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Arjunwad (Seasonal)	543.69	05/08/2005	5271.52	522.45	16/01/1969	0.00	6500.00	540.80	20/08/1990	0.00	526.88	12/03/1985	01/1969 to 11/2014
2	Bawapuram	285.23	02/10/2009	36303.25	270.05	29/05/2013	0.00	8750.00	277.75	01/10/2009	0.00	-	28/04/2004	06/1965 to 05/2015
3	Cholachguda (Seasonal)	536.84	02/10/2009	2747.30	522.88	25/08/2004	0.00	1472.00	531.64	29/06/1991	0.00	523.53	29/04/1996	06/1982 to 11/2014
4	Dameracherla	62.50	05/10/2009	4300.00	54.50	16/08/2009	0.00	5762.00	61.07	06/10/1983	0.00	-	30/06/2004	06/1968 to 05/2015
5	Doddipadu	288.17	18/11/2014	2.62	287.68	13/09/2015	0.00	74.81	288.69	11/08/2015	0.00	-	05/06/2015	11/2014 to 05/2015
6	Gokak Falls (Seasonal)	546.88	23/09/2005	2266.45	537.99	17/06/2012	0.00	3147.00	545.36	10/08/1979	0.00	539.02	22/02/1995	07/1971 to 11/2014
7	Halia	133.57	25/10/2013	2085.00	127.90	07/07/2006	0.00	1125.80	132.33	25/10/2013	0.00	125.15	24/04/2013	06/1984 to 05/2015
8	Huvinhedigi	358.42	02/10/2009	15095.15	341.96	11/05/1979	0.80	13909.00	357.84	02/10/2009	0.10	342.34	05/05/1981	02/1976 to 05/2015
9	Karad	567.16	07/06/1976	8938.00	549.78	15/05/2006	0.00	6312.00	564.82	03/08/2005	0.00	549.88	02/06/1973	06/1965 to 05/2015
10	Keesara	35.81	24/07/1989	14128.18	27.60	06/06/1979	0.00	5180.00	33.00	15/08/1978	0.00	-	21/05/1973	06/1965 to 05/2015
11	Kurundwad	539.76	05/08/2005	9797.98	519.80	27/04/1977	0.00	7786.00	537.72	29/07/2005	0.00	523.56	17/12/1988	05/1972 to 05/2015
12	Madhira	52.01	20/09/2005	3048.41	44.18	25/09/2009	0.00	1306.00	49.28	22/09/1991	0.00	-	22/04/2005	06/1984 to 05/2015
13	Malkhed	400.91	16/08/1990	5007.12	391.95	20/07/2001	0.16	2215.00	398.27	15/10/1998	0.00	-	24/06/1995	08/1990 to 05/2015
14	Mantralayam	318.77	02/10/2009	18882.31	305.71	26/03/2013	0.00	8504.00	314.78	30/09/1978	0.00	305.94	23/03/2004	06/1972 to 05/2015
15	Narasingpur	462.39	10/08/2006	8873.28	448.01	05/12/2004	0.00	7602.00	460.18	17/08/1983	0.00	448.97	11/03/1997	12/1966 to 05/2015
16	Paleru Bridge	73.86	26/10/2014	184.90	71.51	13/07/1984	0.00	2250.00	78.00	06/10/1983	0.00	71.43	28/07/2014	05/1964 to 05/2015
17	Phulgaon (Seasonal)	93.95	23/08/1997	5998.05	81.01	07/05/1991	0.00	3029.00	91.48	27/07/2005	0.00	82.87	19/05/1999	06/1992 to 11/2014
18	Sadalga (Seasonal)	538.95	29/06/1983	2457.29	525.08	26/04/1966	0.00	1759.00	537.55	11/07/1975	0.00	529.43	09/03/1991	06/1969 to 11/2014
19	Samdoli (Seasonal)	546.32	05/08/2005	3064.00	529.10	15/03/1975	0.00	2412.00	543.42	27/07/1989	0.00	-	10/03/1983	12/1966 to 11/2014
20	Sarati	476.79	02/08/1976	3232.89	466.13	14/08/2012	0.00	2757.00	476.09	02/08/1976	0.00	-	28/06/1993	06/1965 to 05/2015
21	T Ramapuram (Seasonal)	356.48	02/10/2009	3720.14	349.37	31/12/2000	5.40	3192.00	355.95	02/10/2009	0.00	-	08/05/2001	12/1965 to 11/2014
22	Takli	423.72	12/08/2006	7661.96	409.54	03/05/2012	0.00	8333.00	422.75	31/07/1967	0.00	411.24	14/05/1996	06/1965 to 05/2015
23	Talikot (Seasonal)	56.66	01/10/2009	1202.30	48.01	16/04/1994	0.00	887.06	55.56	03/10/2009	0.00	50.02	07/07/2002	09/1995 to 11/2014
24	Terwad (Seasonal)	540.39	06/08/2005	3340.00	520.17	02/06/1985	0.00	2183.00	537.30	29/07/1991	0.00	520.17	02/06/1985	08/1979 to 11/2014
25	Vijayawada	19.33	05/10/2009	28140.00	8.51	23/07/1997	13.52	25082.00	18.95	16/10/1998	0.00	9.28	22/02/2012	06/1965 to 05/2015
26	Wadakbal	428.56	29/09/1989	3270.74	418.28	10/05/1978	0.00	2746.00	428.54	29/09/1989	0.00	-	26/05/1992	06/1965 to 05/2015
27	Wadenapally	42.49	05/10/2009	31836.00	24.00	07/06/1987	4.84	23689.00	41.14	16/10/1998	0.00	24.66	06/06/1972	12/1965 to 05/2015
28	Warunji	568.05	30/07/2006	4900.64	550.54	04/02/1973	0.00	4641.00	565.73	02/08/2005	0.00	550.76	22/04/1971	01/1966 to 05/2015
29	Yadgir	361.91	07/09/1969	10609.86	348.90	31/05/1973	0.00	10255.00	361.87	07/09/1969	0.00	350.52	24/04/1998	06/1965 to 05/2015
30	Byladahalli	538.45	17/11/1992	1045.00	529.72	02/05/2011	0.00	339.90	534.65	02/11/2012	0.00	-	24/07/2003	03/1985 to 05/2015
31	Haralahalli	518.35	18/11/1992	7120.00	506.68	26/01/2012	0.00	4559.30	516.43	04/08/1982	0.00	507.14	09/01/2004	08/1965 to 05/2015
32	Holehonnur	562.22	02/08/2013	1280.00	89.25	06/01/2007	1.21	1004.00	95.04	09/08/2007	0.85	89.38	16/01/2010	11/1997 to 05/2015
33	Honnali	546.47	16/07/1994	6760.00	87.38	29/03/1986	3.90	6732.00	545.92	14/08/2008	0.00	537.23	01/04/2004	06/1978 to 05/2015
34	Hoovinahole	96.15	06/09/2008	111.90	94.00	09/12/2007	0.00	75.13	95.76	03/11/2010	0.00	-	25/06/2007	11/1997 to 05/2015
35	Kellodu	650.70	12/11/2010	360.20	97.49	27/01/2006	0.00	399.20	102.60	23/10/2000	0.00	-	01/04/2003	06/1990 to 05/2015
36	Kuppelur	541.90	08/08/2007	787.40	93.01	27/03/1994	0.00	430.00	100.59	17/07/1994	0.00	-	15/04/2001	06/1990 to 05/2015
37	Marol	517.60	18/11/1992	1675.00	507.56	22/02/1990	0.00	1234.50	515.64	03/07/1980	0.00	-	11/02/1992	02/1965 to 05/2015
38	Shimoga	567.95	02/08/2014	3236.00	557.00	29/04/1983	0.00	4124.10	564.76	03/08/1982	0.00	557.17	26/04/2003	06/1971 to 05/2015

Source : SE. Godavari & Krishna Circle during the Year (2014-2015) Krishna Basin ,

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

VI Basin : Cauvery												Unit : MCM
SL. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge	Date	Discharge	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Akkihebbal	750.22	07/08/2014	634.19	746.74	26/06/2014	0.62	634.19	07/08/2014	0.62	26/06/2014	2014-15
2	Annasaval	5.22	18/12/2014	4.70	4.63	17/02/2015	0.00	4.71	19/12/2014	0.00	01/06/2014	2014-15
3	Bendrahalli	633.54	27/10/2014	95.99	631.18	25/07/2014	0.00	95.99	27/10/2014	0.00	01/06/2014	2014-15
4	Biligundulu	262.40	09/08/2014	2511.00	257.63	21/03/2015	12.64	2511.00	09/08/2014	10.21	14/06/2014	2014-15
5	Chunchunkatte	756.25	02/08/2014	707.10	751.63	28/02/2015	0.00	707.10	02/08/2014	0.00	01/06/2014	2014-15
6	Elunuthimangalam	131.04	28/10/2014	50.95	129.25	21/09/2014	0.00	76.39	16/04/2015	0.00	01/06/2014	2014-15
7	Gopurajapuram	2.47	21/10/2014	25.45	0.00	28/08/2014	0.00	30.20	22/10/2014	0.00	01/06/2014	2014-15
8	Hogenakkal	254.25	27/10/2014	120.30	252.06	25/10/2014	0.00	120.30	27/10/2014	0.00	01/06/2014	2014-15
9	K.M.Vadi	768.63	26/07/2014	91.15	765.94	05/03/2015	0.00	91.15	26/07/2014	0.00	01/06/2014	2014-15
10	Kodumudi	124.07	14/09/2014	783.70	122.00	23/04/2015	0.37	783.70	14/09/2014	0.29	17/07/2014	2014-15
11	Kollegal	627.31	09/08/2014	4467.00	623.50	14/02/2015	0.00	4467.00	09/08/2014	0.00	19/06/2014	2014-15
12	Kudige	817.49	02/08/2014	1058.00	811.01	31/03/2015	3.64	1058.00	02/08/2014	3.64	31/03/2015	2014-15
13	Kudlur	436.85	28/09/2014	70.55	435.14	29/08/2014	0.00	70.55	28/09/2014	0.00	01/06/2014	2014-15
14	M.H.Halli	841.36	06/08/2014	489.03	837.97	14/06/2014	0.00	489.03	06/08/2014	0.00	01/06/2014	2014-15
15	Menangudi	7.13	21/10/2014	25.20	5.28	02/03/2015	0.00	25.20	21/10/2014	0.00	01/06/2014	2014-15
16	Musiri	82.73	24/08/2014	751.70	80.60	09/05/2015	8.54	751.70	24/08/2014	0.00	21/06/2014	2014-15
17	Muthankera	710.98	24/07/2014	743.13	707.29	01/04/2015	0.37	789.70	02/08/2014	0.00	09/02/2015	2014-15
18	Nallamaranpatty	130.68	29/10/2014	394.02	128.01	15/10/2014	0.00	394.02	29/10/2014	0.00	01/06/2014	2014-15
19	Nallathur	4.97	22/10/2014	87.15	1.75	11/10/2014	0.00	87.15	22/10/2014	0.00	01/06/2014	2014-15
20	Nellithurai	304.93	02/08/2014	261.30	302.89	11/07/2014	0.23	261.33	02/08/2014	0.00	06/05/2015	2014-15
21	Peralam	8.52	21/10/2014	4.63	7.08	09/12/2014	0.00	4.63	21/10/2014	0.00	01/06/2014	2014-15
22	Porakudi	5.55	21/10/2014	41.94	2.27	19/09/2014	0.00	41.94	21/10/2014	0.00	01/06/2014	2014-15
23	Sakleshpur	891.82	31/07/2014	487.74	887.13	31/03/2015	0.97	487.74	31/07/2014	0.97	31/03/2015	2014-15
24	Savandapur	183.32	28/10/2014	497.94	180.62	26/05/2015	1.31	497.94	28/10/2014	1.31	26/05/2015	2014-15
25	Sevanur	171.60	27/10/2014	15.03	170.52	23/03/2015	0.00	15.03	27/10/2014	0.00	01/06/2014	2014-15
26	T.Bekuppe	605.08	12/10/2014	21.34	604.40	28/03/2015	4.03	21.34	12/10/2014	4.03	28/03/2015	2014-15
27	T.K. Halli	583.57	25/09/2014	186.70	580.39	18/02/2015	0.00	186.70	25/09/2014	0.00	14/06/2014	2014-15
28	T. Narasipur	639.13	08/08/2014	1035.00	634.12	13/02/2015	0.00	1035.00	08/08/2014	0.00	06/06/2014	2014-15
29	Thengudi	8.59	21/10/2014	54.46	5.56	24/04/2015	0.00	54.46	21/10/2014	0.00	01/06/2014	2014-15
30	Thengumarahada	339.31	02/08/2014	33.03	338.40	11/06/2014	0.33	33.03	02/08/2014	0.33	11/06/2014	2014-15
31	Thevur	171.49	12/11/2014	2.85	170.34	15/04/2015	0.00	3.07	11/12/2014	0.00	01/06/2014	2014-15
32	Thimmanahalli	907.20	29/09/2014	85.61	905.46	30/03/2015	0.58	85.61	29/09/2014	0.57	25/05/2015	2014-15
33	Thoppur	Dry Bed										2014-15
34	Urachikottai	160.83	16/09/2014	712.526	157.9	05/08/2014	0	712.53	16/09/2014	0	01/06/2014	2014-15
35	Gandhavayal	94.36	25/10/2014	64.419	92.68	22/09/2014	0.01	64.42	25/10/2014	0.01	22/09/2014	2014-15

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

VII Basin : Pennar												Unit : MCM
Sl No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge	Date	Discharge	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Nellore	9.055	12/12/2014	26.46	7.84	15/10/2014	0	26.46	12/12/2014	0	01/06/2014	2014-15
2	Nandipalli	96.585	28/10/2014	2.00	95.01	03/01/2015	0	2.00	28/10/2014	0	01/06/2014	2014-15
3	Chennur	118.815	19/09/2014	956.85	115.82	18/03/2015	0	956.85	19/09/2014	0	03/07/2014	2014-15
4	Gummanur	491.715	11/10/2014	78.28	490.82	30/06/2014	0	88.64	28/10/2014	0	29/06/2014	2014-15
5	Alladupalli	137.52	19/09/2014	1103.67	133.235	11/08/2014	0	1103.67	19/09/2014	0	06/07/2014	2014-15
6	Kamalapuram	Dry Bed										2014-15
7	Singavaram											
8	Tadipatri											
9	Nagalamedike											

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

VIII Basin : East Flowing Rivers from Mahanadi to Pennar												Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Ankapali	27.48	04/11/2012	3981.00	19.60	10/05/2002	0.00	04/11/2012	3980.54	03/05/2002	0.00	1989-2015
2	Gunupur	85.95	07/08/2007	2987.41	79.38	29/04/2009	1.90	29/07/1991	5285.60	04/06/2003	0.00	1989-2015
3	Kashinagar	57.85	07/08/2007	7321.54	50.79	17/04/1981	3.40	07/08/2007	7321.54	09/06/2003	0.00	1971-2015
4	Purushottampur	18.64	25/10/2013	3750.00	12.00	17/06/1997	0.00	24/10/2013	3432.52	02/04/2007	0.00	1989-2015
5	Srikakulam	14.09	04/08/2006	5624.74	7.32	30/04/2009	0.06	04/08/2006	5624.74	02/06/2003	0.00	1990-2015

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

IX Basin : East Flowing Rivers from Pennar to Kayakumari												Unit : MCM
Sl No.	site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge	Date	Discharge	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	A.P.Puram	63.9	10/11/2014	1.55	62.18	10/06/2014	0	1.55	10/11/2014	0	01/06/2014	2014-15
2	Ambasamudram	297.38	23/10/2014	27.22	296.505	23/05/2015	0	27.22	23/10/2014	0	01/06/2014	2014-15
3	Arcot	158.98	22/09/2014	0.00	158.83	13/01/2015	0	0.00	01/06/2014	0	01/06/2014	2014-15
5	Chengalpet	25.86	15/11/2014	6.42	25.19	23/12/2014	0	6.42	15/11/2014	0	01/06/2014	2014-15
7	Kudalaiyathur	13.44	14/11/2014	7.09	12.24	26/10/2014	0	8.62	15/11/2014	0	01/06/2014	2014-15
8	Kumarapalayam	9.49	16/11/2014	0.00	8.835	10/02/2015	0	0.00	01/06/2014	0	01/06/2014	2014-15
10	Murappandu	18.15	11/12/2014	304.81	14.325	24/06/2014	0.56	304.81	11/12/2014	0.56	24/06/2014	2014-15
11	Naidupeta	21.19	17/12/2014	13.54	20.5	27/11/2014	0	13.54	17/12/2014	0	01/06/2014	2014-15
12	Paramakudi	38.5	26/11/2014	36.66	37.24	28/12/2014	0	36.66	26/11/2014	0	01/06/2014	2014-15
13	Sulurpet	2.705	14/11/2014	126.38	0.27	28/05/2015	0	126.38	14/11/2014	0	01/06/2014	2014-15
14	Theni	280.5	27/10/2014	119.76	278.575	10/06/2014	0	119.76	27/10/2014	0	01/06/2014	2014-15
15	Vazhavachanur	134.51	14/02/2015	29.01	133.6	20/04/2015	0	29.01	14/02/2015	0	01/06/2014	2014-15
4	Avaranakuppam	Dry Bed										2014-15
6	Irrukkankudi											
9	Magaral											
16	Villupuram											
17	Gummanur											

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore,

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

X Basin : Narmada												Unit : MCM
Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed Discharge		Minimum Observed Discharge		Period of Records
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Discharge (cumec)	Date	Discharge (cumec)	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Narmada at Dindori	666.80	22/07/2014	1437	662.51	26/05/2015	0.727	NA	NA	NA	NA	2014-15
2	Narmada at Manot	453.19	06/08/2014	3475	442.78	16/06/2014	0.27	NA	NA	NA	NA	2014-15
3	Burhner at Mohgaon	457.35	06/08/2014	2149	449.23	03/06/2014	0.24	NA	NA	NA	NA	2014-15
4	Banjar at Bamni	444.18	23/07/2014	524.7	440.11	31/05/2015	0.00	NA	NA	NA	NA	2014-15
5	Hiran at Paten	349.20	06/08/2014	779.8	341.51	07/05/2015	0.50	NA	NA	NA	NA	2014-15
6	Sher at Belkhedi	344.40	06/08/2014	415.6	341.08	31/05/2015	0.34	NA	NA	NA	NA	2014-15
7	Narmada at Barmanghat	317.74	08/08/2014	4134	307.55	13/07/2014	18.80	NA	NA	NA	NA	2014-15
8	Shakkar at Gadarwada	325.23	23/07/2014	554.4	322.33	31/05/2015	0.16	NA	NA	NA	NA	2014-15
9	Narmada at Sandia	306.91	08/08/2014	4602	299.28	16/06/2014	75.02	NA	NA	NA	NA	2014-15
10	Narmada at Hoshangabad	289.10	09/08/2014	4752	284.26	17/06/2014	83.77	NA	NA	NA	NA	2014-15
11	Ganjal at Chhidgaon	291.30	23/07/2014	693.3	287.50	28/06/2014	0.00	NA	NA	NA	NA	2014-15
12	Narmada at Handia	266.26	08.09.2014	4909	260.73	07/06/2014	97.74	NA	NA	NA	NA	2014-15
13	Kundi at Kogaon	160.20	08/09/2014	3753	152.22	07/02/2015	0.00	NA	NA	NA	NA	2014-15
14	Narmada at Mandleshwar	145.75	08/08/2014	10408	139.27	02/06/2014	76.13	NA	NA	NA	NA	2014-15
15	Uri at Dhulsar	155.10	08/09/2014	1094	151.25	06/11/2014	0.00	NA	NA	NA	NA	2014-15
16	Goi at Pati	191.57	09/09/2014	242.7	188.93	26/12/2014	0.00	NA	NA	NA	NA	2014-15
17	Narmada at Garudeshawar	23.15	09/09/2014	10016	13.13	14/10/2014	11.20	NA	NA	NA	NA	2014-15
18	Orsang at Chandwada	22.80	09/09/2014	1426	18.01	21/06/2014	0.00	NA	NA	NA	NA	2014-15
19	Narmada at Bijora	374.80	07/08/2014	4480	368.00	31/07/2014	0.000	NA	NA	NA	NA	2014-15

Source SE(C),CWC, Office of the Chief Eng., Narmada Basin Oraganistion, Bhopal (MP).

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

XI Basin : Tapi												Unit : MCM
Sl No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed Discharge		Minimum Observed Discharge		Period of Records
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Dedtalai	288.75	23/07/2014					NA	NA	NA	NA	2014-15
2	Burhanpur	236.70	23/07/2014	1834	Back Water Effect		0.000	NA	NA	NA	NA	2014-15
3	Gopalkheda	250.36	24/07/2014	2743	R-Dry	26/12/2014	0.000	NA	NA	NA	NA	2014-15
4	Yerli	224.24	25/07/2014	2434	214.07	06/01/2014	0.000	NA	NA	NA	NA	2014-15
5	Gidhade	136.00	24/07/2014	9463	129.90	06/01/2014	0.000	NA	NA	NA	NA	2014-15
6	Sarangkheda	121.75	24/07/2014	10946	109.70	06/01/2014	0.000	NA	NA	NA	NA	2014-15

Source: Superintending Engineer, Tapi Division, CWC, Gandhi Nagar.

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

XII Basin : WTT (West Flowing Rivers from Tapi to Tadri)												Unit : MCM
SL. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level(m)	Date	Discharge (Cumecs)	Discharge	Date	Discharge	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Santeguli	17.54	31/07/2014	1954.88	10.45	10/04/2015	2.67	1954.88	31/07/2014	0.74	12/04/2015	2014-15

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore,

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari												Unit : MCM
SL. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level(m)	Date	Discharge (Cumecs)	Discharge	Date	Discharge	Date	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Addoor	5.39	20/07/2014	1083.22	0.19	12/05/2015	0.00	1083.22	20/07/2014	0.00	01/06/2014	2014-15
2	Ambarampalayam	220.48	28/10/2014	94.87	219.05	14/06/2014	0.95	94.87	28/10/2014	0.95	14/06/2014	2014-15
3	Arangaly	4.41	04/08/2014	603.05	0.10	15/06/2014	13.69	639.90	01/09/2014	1.59	07/02/2015	2014-15
4	Ashramam	4.96	20/05/2015	118.55	2.08	29/03/2015	0.00	118.55	20/05/2015	0.00	01/06/2014	2014-15
5	Avershe	16.68	01/08/2014	943.76	10.96	23/04/2015	0.00	943.76	01/08/2014	0.00	01/06/2014	2014-15
6	Ayilam	7.31	23/08/2014	399.10	1.19	26/02/2015	0.00	399.10	23/08/2014	0.00	01/06/2014	2014-15
7	Bantwal	9.02	01/08/2014	3949.00	1.27	11/06/2014	1.62	3949.00	01/08/2014	0.00	19/12/2014	2014-15
8	Erinjipuzha	17.87	07/08/2014	1041.87	12.65	30/03/2015	0.01	1041.87	07/08/2014	0.01	30/03/2015	2014-15
9	Haladi	7.99	01/08/2014	964.95	0.95	21/05/2015	0.16	964.95	01/08/2014	0.16	21/05/2015	2014-15
10	Kalampur	12.12	04/08/2014	359.42	7.36	29/01/2015	0.00	359.42	04/08/2014	0.00	04/01/2015	2014-15
11	Kallooppara	7.44	24/08/2014	732.70	0.74	06/03/2015	0.00	732.70	24/08/2014	0.00	29/01/2015	2014-15
12	Karathodu	10.34	02/08/2014	760.18	2.53	19/04/2015	0.00	760.18	02/08/2014	0.00	01/06/2014	2014-15
13	Kidangoor	6.83	04/08/2014	577.16	0.06	02/03/2015	0.00	577.16	04/08/2014	0.00	07/02/2015	2014-15
14	Kumbidi	8.59	02/08/2014	3363.07	2.89	27/03/2015	0.00	3363.07	02/08/2014	0.00	02/03/2015	2014-15
15	Kuniyil	6.37	24/07/2014	1931.42	1.59	27/06/2014	56.62	1931.42	24/07/2014	0.00	01/06/2014	2014-15
16	Kuttyadi	5.27	06/08/2014	431.60	0.57	18/02/2015	1.31	431.60	06/08/2014	1.10	02/06/2014	2014-15
17	Kuzhithurai	2.84	18/05/2015	75.48	0.18	30/03/2015	0.00	75.48	18/05/2015	0.00	01/06/2014	2014-15
18	Malakkara	5.45	04/08/2014	930.63	-0.05	24/02/2015	0.00	930.63	04/08/2014	0.00	01/06/2014	2014-15
19	Mankara	49.50	02/08/2014	459.19	47.02	06/04/2015	0.00	459.19	02/08/2014	0.00	06/04/2015	2014-15
20	Neeleswaram	5.12	04/08/2014	1820.37	-0.02	27/06/2014	109.00	1820.37	04/08/2014	0.69	05/12/2014	2014-15
21	Pattazhy	8.80	23/08/2014	563.28	1.16	19/02/2015	1.43	563.28	23/08/2014	1.43	19/02/2015	2014-15
22	Perumannu	13.56	01/08/2014	2005.73	6.13	14/01/2015	1.05	2005.73	01/08/2014	0.88	13/01/2015	2014-15
23	Pudur	61.93	02/08/2014	182.97	59.67	09/07/2014	0.03	182.97	02/08/2014	0.01	17/06/2014	2014-15
24	Pulamanthole	15.71	02/08/2014	690.80	12.89	25/03/2015	0.00	690.80	02/08/2014	0.00	01/06/2014	2014-15
25	Ramamangalam	5.97	02/08/2014	917.05	0.53	03/03/2015	40.88	917.05	02/08/2014	34.01	07/01/2015	2014-15
26	Thumpamon	11.53	24/08/2014	520.60	5.36	01/03/2015	0.00	520.60	24/08/2014	0.00	01/06/2014	2014-15
27	Vandiperiyar	793.07	04/08/2014	88.16	790.96	13/04/2015	0.00	88.16	04/08/2014	0.00	18/02/2015	2014-15
28	Yennehole	22.84	01/08/2014	784.24	17.11	15/03/2015	0.00	792.50	20/07/2014	0.00	15/02/2015	2014-15

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore,

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

XIV Basin : Mahi												Unit : MCM
Sl No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of records
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge		Discharge		
								Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Anas at Chakaliya	224.35	28/07/2005	6956.50	181.55	13/11/2001	0	NA	NA	Given under column 6,7 and 8		1991-2015
2	Jakham at Dhariawad	209.35	11/08/2006	1979.94	203.18	12/07/1997	0	NA	NA			1988-2015
3	Mahi at Khanpur	26.82	12/08/2006	31061.91	8.87	15/03/2003	1.49	NA	NA			1978-2015
4	Mahi at Mataji	306.30	28/07/1996	10257.00	269.33	01/05/2001	0	NA	NA			1982-2015
5	Mahi at Paderdibadi	147.53	19/08/2006	16153.25	0.00	04/02/2001	0	NA	NA			1978-2015
	Som at Rangeli	158.24	19/08/2006	5179.31	150.00	15/05/2002	0	NA	NA			1978-2015

Source: Superintending Engineer, Mahi Division, CWC, Gandhi Nagar.

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

XV Basin : Sabarmati												Unit : MCM
Sl No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of records
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge		Discharge		
								Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Deril Bridge	92.30	30/07/2015	3128.70	89.00	14/01/2003	0	NA	NA	Given under column 6,7 and 8		1991-2015
2	Kheroj	215.05	29/07/2015	0.00	210.50	19/12/2002	0	NA	NA			1988-2015
3	Ratanpur (Gadvel)	44.98	12/08/2006	3732.15	0.00	23/04/2000	0	NA	NA			1978-2015
4	Voutha	20.35	10/07/2007	4957.75	12.00	18/10/2001	0	NA	NA			1971-2015
5	Kheda	25.33	12/08/2006	4507.51	0.00	18/01/1997	0	NA	NA			1980-2015
6	Kotra(Jotasan)	291.55	20/08/2006	1339.67	199.00	01/06/2001	0	NA	NA			1970-2015

Source: Superintending Engineer, Mahi Division, CWC, Gandhi Nagar.

Table 6: Site wise Maximum & Minimum Observed Water level and Discharge in River Basins till 2014-15

XVI Basin : WKS (West Flowing Rivers of Kutch & Saurashtra including Luni)												Unit : MCM
sl no	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of records
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1	Chitrasani	188.10	29/07/2015	625.46	0.00	31/01/2000	0	NA	NA	Given under column 6,7 and 8		1988-2015
2	Abu Road	258.40	08/09/1992	1164.00	0.00	19/06/1999	0	NA	NA			1978-2015
3	Kamalpur	38.01	08/09/1992	4221.00	0.00	01/10/1989	0	NA	NA			1971-2015
4	Sarotry	190.78	08/09/1992	2672.00	0.00	09/08/2000	0	NA	NA			1980-2015
5	Ganod	33.12	27/07/1988	4160.00	0.00	08/01/1992	0	NA	NA			1970-2015
6	Balotra	106.04	09/09/1992	2907.00	0.00	31/01/1998	0	NA	NA			1990-2015
7	Gandhav	38.88	19/07/1979	4300.00	0.00	12/06/1988	0	NA	NA			1974-2015
8	Gungan	154.97	28/07/1988	2681.00	0.00	11/01/1989	0	NA	NA			1970-2015
9	Una	16.93	04/09/2014	34.83	0.00	27/05/2015	0	NA	NA			2014-2015
10	Sapawada	40.90	03/08/1994	964.30	0.00	25/08/1996	0	NA	NA			1989-2015
11	Lowara	64.35	29/06/2005	2441.00	0.00	09/03/1989	0	NA	NA			1970-2015

Source: Superintending Engineer, Mahi Division, CWC, Gandhi Nagar.

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

I Basin : Mahanadi Unit: M. C. M.														
Sl. No.	Site Name	Period	Dependable Flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ANDHIARKHORE	6/2005 to 5/2015	646.30	537.98	504.80	434.38	273.64	222.72	216.34	209.94	177.69	110.94	39.72	34.50
2	BAMNIDHI		4306.42	3978.58	3595.45	3346.54	2877.60	2405.55	2203.99	1888.17	1726.00	1559.33	1109.29	1066.02
3	BARONDA		2787.99	1946.03	1889.76	1852.53	1701.21	1389.39	1233.24	1020.97	937.63	935.23	664.42	634.43
4	BASANTPUR		27107.73	26255.34	25380.23	24954.88	24602.45	23421.28	21716.52	20356.11	18685.03	15690.61	13603.90	13493.04
5	GHATORA		1093.54	1036.20	973.26	932.62	875.05	742.25	566.58	502.26	473.64	416.55	241.10	223.92
6	JONDHRA		17546.93	15160.13	13575.68	12427.81	11270.36	10673.68	9654.31	8030.10	6721.95	4959.25	3574.65	3492.03
7	KANTAMAL		20758.40	17701.74	17049.80	16066.62	13697.33	11994.72	10742.46	9605.99	9302.87	9267.76	6886.45	6623.27
8	KESINGA		14198.29	12048.47	11114.42	10605.82	10331.02	8788.32	6874.12	6474.50	6414.94	6352.96	4851.35	4687.01
9	KOTNI		3955.78	2714.76	2678.99	2567.63	2283.80	2061.02	1897.98	1833.25	1575.01	1047.10	457.57	413.40
10	KURUBHATA		3078.29	2242.80	2144.65	2053.95	1897.84	1778.04	1703.84	1635.88	1527.03	1334.50	1006.21	977.51
11	MANENDRAGARH		418.96	382.50	336.43	313.46	292.19	262.98	245.83	200.96	177.32	159.63	149.90	148.01
12	PATHARDIH		1723.12	1575.34	1405.41	1323.19	1266.24	1162.87	1071.26	1006.73	931.20	790.50	583.27	565.93
13	RAJIM		4678.42	3976.77	3808.44	3686.75	3561.74	3160.87	2774.40	2219.49	1949.84	1870.41	1551.48	1519.25
14	RAMPUR		2147.28	1710.75	1474.06	1352.00	1296.19	1149.14	1017.30	1002.36	940.73	808.00	695.40	688.25
15	SALEBHATA		4130.97	3489.32	3086.68	2726.85	2250.99	2067.03	1855.69	1762.38	1583.28	1200.37	1013.12	1007.78
16	SEORINARAYAN		22357.53	21262.36	21192.37	21107.53	20571.65	19221.54	17646.12	15292.12	13532.41	11350.33	10514.15	10509.40
17	SIMGA		9390.10	8947.67	8053.85	7584.88	6866.87	5904.65	5283.95	4786.26	4184.94	3006.87	2071.13	2014.76
18	SUNDERGARH		4116.32	3226.40	3152.59	3051.03	2832.68	2597.55	2399.11	2247.37	2161.33	2081.91	1898.93	1881.81
19	TIKARPARA		67784.13	60558.61	56748.93	54004.15	49815.50	46947.24	46132.94	45361.88	44801.64	43866.74	39718.71	39295.59

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

II Basin : Subernarekha														<i>Unit: M. C. M.</i>
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ADITYAPUR	6/2005 to 5/2015	4874.89	4420.64	3996.86	3705.25	3368.99	3072.94	2512.74	2173.70	1911.97	1390.47	330.37	233.65
2	ANANDPUR		8420.46	6646.13	6229.25	5869.82	5399.28	5270.46	4665.52	3220.11	2730.96	2648.59	1438.33	1307.19
3	CHAMPUA		1722.82	1617.98	1483.14	1370.28	1221.06	1160.97	1106.45	864.21	767.73	760.12	471.30	439.52
4	GHATSILA		13683.45	11697.84	10991.64	10503.87	9674.02	8275.45	7269.39	6804.60	5773.49	3774.46	1975.56	1856.45
5	GOVINDPUR		6577.29	5018.17	4793.11	4661.13	4500.84	4010.36	3376.43	3109.32	2819.78	2258.60	1871.19	1850.82
6	JAMSHEDPUR		9255.31	9191.79	9186.28	9044.72	8582.49	7754.29	6046.10	4836.26	4085.49	2891.45	961.15	794.92
7	MURI		741.60	724.01	714.59	704.62	570.94	385.47	326.38	282.66	268.00	242.92	89.49	73.45

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

III Basin : Brahmani & Baitarani														<i>Unit: M. C. M.</i>
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ALTUMA	6/2005 to 5/2015	879.34	819.23	785.48	761.45	730.98	683.63	647.80	587.24	547.04	513.34	267.54	241.59
2	GOMLAI		16089.94	15375.75	13990.08	13356.24	12321.67	10718.79	9223.47	7255.40	6692.60	6410.95	3372.33	3046.08
3	JARAIKELA		5752.53	5220.94	4966.40	4699.51	3732.23	2757.42	2632.88	2325.96	2022.49	1599.30	1119.03	1082.76
4	JENAPUR		22472.90	21500.36	20383.03	18876.34	16280.85	15847.41	15209.27	14263.16	13257.17	11557.58	5958.43	5404.97
5	PANPOSH		17732.99	13286.46	12480.41	11992.29	11086.56	10005.12	9060.77	7517.07	6964.94	6705.77	3539.54	3198.21
6	TILGA		2596.75	2215.63	2058.72	1964.92	1893.13	1816.04	1758.04	1662.30	1614.98	1594.89	967.61	898.72

Source : Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

IV Basin : Godavari														Unit: M. C. M.
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	AMBABAL AT NARANGI	06/2005 to 05/2015	1490.59	1136.05	1120.33	1061.37	887.74	760.53	670.27	603.45	577.48	556.85	481.29	474.00
2	BETMOGRA AT MANER		423.28	236.24	236.11	229.34	191.37	103.64	38.02	19.85	13.76	10.38	0.91	0.00
3	BHADRACHALAM AT GODAVARI		Sufficient data not available											
4	CHERRIBEDA AT BARDHA		1462.61	1167.47	1033.33	966.13	907.80	738.84	617.82	443.74	373.37	371.50	322.11	317.00
5	CHINDNAR AT INDRAVATHI		15090.29	11854.71	11216.80	10832.35	10604.23	9798.03	8256.90	6985.55	6184.13	5150.55	4590.45	4570.00
6	DEGLOOR AT LENDI		491.19	368.10	319.34	292.94	260.73	223.97	134.89	68.47	58.77	46.11	26.48	25.00
7	DHALEGAON AT GODAVARI		6269.57	3113.65	1684.20	990.99	696.75	300.22	180.12	51.48	0.00	0.00	0.00	0.00
8	G.R.BRIDGE AT GODAVARI		6831.71	3925.11	1947.06	1020.36	882.64	735.53	577.99	311.08	228.35	222.26	80.34	65.00
9	GANDLAPET AT PEDDAVAGU		353.23	92.86	72.63	62.89	46.15	20.99	9.58	0.98	0.00	0.00	0.00	0.00
10	JAGDALPUR AT INDRAVATHI		3490.58	3063.54	2910.24	2819.00	2653.85	2443.20	2082.72	1824.12	1705.52	1485.97	1229.31	1210.00
11	KIWAIBALENGA AT BAWARDHI		1321.10	1181.38	923.55	706.70	425.72	178.10	2.46	1.21	0.86	0.83	0.12	0.00
12	KONTA AT SABARI		22948.45	21151.00	20033.71	19523.96	19499.08	18574.33	15316.81	13245.82	12204.09	10379.29	7786.58	7572.00
13	KOSAGUMDA AT BHASKAL		2544.45	1342.53	1335.10	1321.38	1211.53	1030.03	946.93	803.32	728.20	679.37	599.13	592.00
14	MANCHERIAL AT GODAVARI		14717.86	10865.92	10110.64	9083.94	5552.55	2493.79	2270.39	1443.93	1086.51	1035.51	519.63	290.00
15	MURTHAHANADI AT JOURNALA		1761.46	1669.41	1652.49	1627.97	1508.56	1333.57	1169.63	1021.51	984.22	973.23	907.30	900.00
16	NOWRANGPUR AT INDRAVATHI		2186.08	1616.97	1438.90	1344.08	1277.08	1071.23	834.13	776.43	753.73	705.92	546.53	531.00
17	PACHEGAON AT PRAVARA		2322.11	1386.87	1311.19	1178.84	722.28	322.42	261.17	233.02	212.82	192.77	34.57	18.00
18	PATHAGUDEM AT INDRAVATHI		39701.64	35891.95	32646.79	29718.92	25776.80	24639.66	22763.78	19446.21	17268.66	14620.98	11507.01	11268.00
19	PERUR AT GODAVARI		145075.08	107154.55	102393.52	95402.24	82719.42	72760.73	58039.74	52834.63	49703.85	43392.05	25124.44	23350.00
20	POLAVARAM AT GODAVARI		148072.11	128922.20	120843.22	114000.58	101499.30	92770.97	71766.88	58380.24	57707.75	56321.68	31702.58	29023.00
21	POTTERU (SEASONAL) AT POTTERU VAGU		Sufficient data not available											
22	PURNA AT PURNA		5306.82	2464.50	1846.26	1491.91	935.19	350.11	313.57	258.33	239.19	230.42	127.41	116.00
23	SAIGAON AT ARI		2241.36	946.58	926.42	844.72	639.98	512.28	277.81	90.71	52.06	42.84	11.82	9.00
24	SANGAM AT MURREDU		491.63	416.24	324.58	279.32	264.39	250.73	218.98	174.32	160.22	153.76	51.69	41.00
25	SARADAPUT AT SABARI		7553.32	7101.33	7010.91	6552.07	5565.73	5475.83	4540.64	3846.74	3668.31	3387.72	2802.17	2748.00
26	SOMANPALLY (SEASONAL) AT MANNER		Sufficient data not available											
27	SONARPAL AT MARKANDI		1096.29	959.03	851.60	792.78	716.69	637.17	632.14	617.42	581.58	513.65	358.70	344.00
28	TUMNAR AT DANTEWARA		1999.97	1868.91	1847.08	1804.44	1670.72	1357.98	993.24	879.73	836.54	761.76	622.46	610.00
29	YELLI AT GODAVARI		12579.35	8216.74	5994.83	4273.88	2282.66	1745.64	1512.44	772.49	419.50	218.32	88.36	82.00
30	ZARI AT DUDHNA		12579.35	661.14	631.82	529.27	269.32	176.09	147.40	127.64	102.93	58.98	39.03	39.00

Source : SE, Godavari Circle, Central Water Commission, Hyderabad, Wainganga Division, C.GO complex, Block-C, 2nd Floor, Seminary Hills Nagpur

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

V Basin : Krishna Unit: M. C. M.														
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	BAWAPURAM AT TUNGABHADRA	6/2005 to 5/2015	11415.09	9907.89	8516.97	7683.16	6779.12	5920.72	5586.02	4840.79	4323.65	3808.85	1577.74	1350.64
2	DAMERACHERLA AT MUSI		2161.37	2049.44	1915.08	1809.60	1681.28	1594.73	1510.74	966.38	733.22	711.85	193.58	136.86
3	HALIA AT HALIA		867.69	531.54	510.52	490.25	448.31	329.77	197.15	169.98	167.89	164.06	40.22	26.62
4	HUVINHEDIGI AT KRISHNA		26772.73	25600.80	22914.63	19425.62	13482.35	12338.09	11806.72	11085.16	10791.41	10596.71	5688.38	5150.87
5	KARAD AT KRISHNA		10789.72	9729.13	7662.52	5872.40	3829.01	3728.55	3519.34	2946.42	2644.87	2398.33	1581.53	1500.74
6	KEESARA AT MUNNERU		4216.98	4012.10	3463.73	2978.95	2374.77	2282.20	1948.22	1265.00	948.95	694.56	457.77	441.73
7	KURUNDWAD AT KRISHNA		24581.49	22288.58	18486.67	15436.00	12135.19	11697.36	10720.69	9922.12	9512.94	8824.34	8368.74	8345.94
8	MADHIRA AT WYRA		969.76	908.13	806.95	691.41	524.26	503.86	444.46	382.10	337.87	270.23	197.42	192.06
9	MALKHED AT KAGNA		2197.59	1264.07	1145.58	1088.65	1017.23	919.76	851.15	720.32	664.50	622.60	146.47	95.26
10	MANTRALAYAM AT TUNGABHADRA		12759.35	11442.55	9128.46	7955.80	7654.40	7552.93	6703.13	5664.18	5217.91	4726.91	2212.73	1953.21
11	NARASINGPUR AT BHIMA		11453.00	9312.74	6191.35	4185.09	2510.55	2009.32	1899.82	1632.85	1400.80	1101.75	157.37	64.52
12	SARATI AT NIRA		3021.22	2452.99	2049.03	1723.92	1304.38	1108.33	867.63	699.46	571.32	335.63	57.76	36.41
13	T RAMAPURAM (SEASONAL) AT HAGARI		1697.25	1068.18	1033.30	986.42	857.37	646.64	485.13	457.40	437.78	398.31	298.24	288.72
14	TAKLI AT BHIMA		11431.23	8491.22	6330.22	4790.50	2931.60	2075.31	2035.49	1819.46	1667.15	1522.66	147.01	0.00
15	VIJAYAWADA AT KRISHNA		35104.43	26645.08	26381.67	22736.40	14235.88	12543.37	10359.27	8041.34	6072.70	3359.60	1780.53	1714.70
16	WADAKBAL AT SINA		2009.75	853.62	803.82	717.19	554.13	424.68	261.17	147.58	112.79	108.99	26.65	17.65
17	WADENAPALLY AT KRISHNA		38191.66	37460.42	36373.61	32569.61	21755.01	16477.60	15789.54	14237.67	12119.02	8891.31	3282.68	2789.91
18	WARUNJI AT KOYNA		6487.21	6001.27	4817.15	3907.91	2894.48	2655.95	2277.78	2007.62	1909.05	1719.87	966.55	890.49
19	YADGIR AT BHIMA		14125.72	12442.94	9424.60	7924.54	7596.42	6144.48	4491.36	4067.41	3515.57	2547.25	1158.21	1042.99
20	BYLADAHALLI AT HARIDRA		626.40	386.12	366.83	356.64	344.02	325.42	298.33	246.14	225.97	216.70	170.33	165.55
21	HARALAHALLI AT TUNGABHADRA		10055.36	8340.36	7985.06	7744.54	7443.60	7224.13	7127.97	6795.92	6622.37	6521.26	4386.23	4153.09
22	HOLEHONNUR AT BHADRA		2906.12	2819.20	2611.49	2468.46	2317.92	2252.30	2217.55	1689.95	1468.09	1461.86	1456.32	1455.96
23	HONNALI AT TUNGABHADRA		10938.03	9349.43	8676.42	8260.23	7979.36	7859.31	7671.93	7334.68	7096.45	6825.81	5128.56	4950.91
24	HOOVINAHOLE AT SWARNAMUKHI		67.82	55.17	46.90	35.49	12.34	4.03	2.57	0.54	0.00	0.00	0.00	0.00
25	KELLODU AT VEDAVATHI		281.21	70.35	69.28	63.28	38.82	14.30	4.20	1.65	1.35	1.24	1.17	1.00
26	KUPPELUR AT KUMUDAVATHI		939.29	748.30	656.75	613.28	600.62	531.41	433.67	394.34	367.22	318.84	109.42	88.11
27	MAROL AT VARADA		3350.64	2706.00	2648.39	2605.94	2557.14	2433.09	2325.07	2143.15	2024.14	1933.67	1399.70	1344.03
28	SHIMOGA AT TUNGA		7671.57	7177.23	6830.46	6580.65	6307.52	6153.01	6045.95	5928.86	5683.07	5227.85	4620.87	4571.82
29	ARJUNWAD (SEASONAL) AT KRISHNA	6/2005 to 11/2014	Sufficient data not available (Seasonal site from 01-06-2016)											
30	CHOLACHGUDA (SEASONAL) AT MALAPRABHA	11/2014 to 5/2015	Sufficient data not available(Discharge observation from 18-11-2014).											
31	DODDIPADU. AT HUNDRI	6/2005 to 11/2014	Sufficient data not available (Seasonal site from 01-06-2016)											
32	GOKAK FALLS (SEASONAL) AT GHATAPRABHA	6/2005 to 5/2015	Sufficient data not available(Discharge observation suspended on 31-05-2007 and restarted GQ to GDSQ w.e.f 01-03-2014).											
33	PALERU BRIDGE AT PALERU	6/2005 to 11/2014	Sufficient data not available (Seasonal site from 01-06-2016)											
34	PHULGAON (SEASONAL) AT BHIMA													
35	SADALGA (SEASONAL) AT DUDHGANGA													
36	SAMDOLI (SEASONAL) AT VARNA													
37	TALIKOT (SEASONAL) AT DON													
38	TERWAD (SEASONAL) AT PANCHGANGA													

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

VI Basin : Cauvery Unit: M.C.M.														
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	AKKIEBBAL AT HEMAVATHI	6/2005 to 5/2015	2164.06	1976.65	1965.02	1821.14	1480.04	1388.56	1260.27	1166.26	1096.30	991.15	466.22	NA
2	ANNAVASAL AT NATTAR		36.94	30.31	27.43	25.56	23.81	21.28	18.83	16.89	14.56	10.90	4.59	NA
3	BENDRAHALLI AT SUVARNAVATHI		89.99	66.89	59.76	54.37	49.09	43.83	32.05	26.62	24.91	21.93	8.07	NA
4	BILIGUNDULU AT CAUVERY		10785.40	9480.43	8014.54	7340.31	7116.62	6600.60	6339.93	6088.86	5984.66	5959.17	3154.66	NA
5	CHUNCHUNKATTE AT CAUVERY	6/2008 to 5/2015	Sufficient data not available											
6	ELUNUTHIMANGALAM AT NOYYAL	6/2005 to 5/2015	246.66	211.37	203.41	196.23	183.82	172.23	148.42	134.01	107.74	52.00	10.67	NA
7	GANDHAVAYAL AT GANDHAYAR	6/2013 to 5/2015	Sufficient data not available											
8	GOPURAJAPURAM AT PURAVIDAIYANAR	6/2005 to 5/2015	110.15	85.27	75.82	69.96	64.55	60.59	51.86	39.87	32.99	24.52	15.47	NA
9	HOGENAKKAL AT CHINNAR		154.91	43.76	42.77	37.13	17.61	6.00	4.83	2.44	1.51	1.28	0.62	NA
10	K.M.VADI AT LAKHSHMANTHIRTA		676.75	558.57	544.30	509.10	412.60	361.37	318.97	239.92	211.29	200.57	133.51	NA
11	KODUMUDI AT CAUVERY		11301.51	10902.08	10158.49	9675.94	9192.01	8116.42	6890.51	6619.56	6500.81	6262.26	3944.41	NA
12	KOLLEGAL AT CAUVERY		9828.67	8730.63	8307.66	7762.22	6610.09	5903.24	5654.35	5349.34	5060.48	4691.14	2284.52	NA
13	KUDIGE AT CAUVERY		4268.86	3831.48	3554.22	3409.72	3226.58	2853.91	2626.86	2245.49	2071.43	2007.55	1802.53	NA
14	KUDLUR AT PALAR		137.72	73.83	53.79	41.80	34.40	31.67	22.82	16.67	13.49	7.81	2.90	NA
15	M.H.HALLI AT HEMAVATHI		1122.15	994.70	981.80	960.64	893.54	835.30	806.73	770.21	740.94	700.02	627.44	NA
16	MENANGUDI AT NOOLAR		90.58	86.65	75.89	67.40	57.45	54.26	53.30	50.97	47.72	42.73	21.84	NA
17	MUSIRI AT CAUVERY		12526.75	11672.66	10090.70	9263.04	8736.74	7636.92	6308.43	5793.31	5535.44	5052.72	3107.97	NA
18	MUTHANKERA AT KABINI		3617.01	3183.47	3154.08	3108.74	3005.84	2737.53	2417.27	1993.01	1837.15	1834.94	1402.14	NA
19	NALLAMARANAPATTY AT AMARAVATHI		923.50	425.95	331.34	270.10	212.27	176.10	155.07	78.88	46.10	40.91	9.68	NA
20	NALLATHUR AT NANDALAR	6/2006 to 5/2015	Sufficient data not available											
21	NELLITHURAI AT BHAVANI	6/2005 to 5/2015	2373.41	2281.33	2181.10	2120.23	1926.66	1678.54	1625.27	1317.63	1150.06	1045.13	796.93	NA
22	PERALAM AT VANJIYAR		26.83	25.16	22.31	20.82	18.02	13.13	11.32	9.56	8.85	8.69	4.18	NA
23	PORAKUDI AT ARASALAR		162.40	140.85	133.08	123.40	105.92	100.04	77.52	49.91	40.98	33.94	19.53	NA
24	SAKLESHPUR AT HEMAVATHI		1987.11	1660.75	1529.55	1427.56	1313.09	1269.67	1223.75	1201.33	1165.40	1091.16	903.56	NA
25	SAVANDAPUR AT BHAVANI		959.95	896.04	725.76	646.71	632.14	601.86	573.60	553.15	500.65	395.57	262.29	NA
26	SEVANUR AT CHITTAR		19.11	10.61	9.58	8.95	8.40	7.54	6.74	6.32	6.07	5.79	0.59	NA
27	T. BEKUPPE AT ARKAVATHI	6/2007 to 5/2015	Sufficient data not available											
28	T.K.HALLI AT SHIMSA	6/2005 to 5/2015	1311.06	1089.19	1048.14	942.02	709.22	655.17	536.74	384.50	347.46	341.96	226.29	NA
29	T.NARASIPUR AT KABINI		4668.31	3643.69	3369.28	3083.65	2629.62	2385.78	2204.82	2152.89	2028.39	1768.86	1165.83	NA
30	THENGUDI AT THIRUMALAIRAJANAR		227.53	212.20	200.75	187.69	164.15	153.80	142.02	92.94	70.54	61.70	40.00	NA
31	THENGUMARAHADA AT MOYAR		560.57	516.08	501.55	449.06	338.73	322.31	310.72	309.92	296.83	268.77	161.20	NA
32	THEVUR AT SARABENGA		45.82	26.64	19.16	14.50	10.98	9.42	8.29	7.59	7.37	7.26	0.72	NA
33	THIMMANAHALLI AT YAGACHI		408.90	390.40	379.27	367.38	293.27	203.97	196.36	168.96	155.99	149.78	76.22	NA
34	THOPPUR AT THOPPAIYAR		26.30	5.80	3.23	1.93	1.07	0.15	0.04	0.00	0.00	0.00	0.00	NA
35	URACHIKOTTAI AT CAUVERY		9901.42	8600.20	8413.20	8194.40	7421.15	6565.63	6031.70	5665.31	5420.61	4995.15	3330.36	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

VII Basin : Pennar														Unit: M.C.M.
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ALLADUPALLI AT KUNDERU	6/2005 to 5/2015	3504.18	3173.46	3144.04	3059.87	2888.38	2485.60	2037.28	1736.46	1440.80	1039.40	664.29	NA
2	CHENNUR AT PENNAR		4763.69	4210.73	3688.42	3436.14	3331.98	2980.70	2562.23	2282.27	2133.02	1960.92	776.76	NA
3	KAMALAPURAM AT PAPAGNI		156.06	107.94	53.42	27.30	22.65	15.70	5.52	0.55	0.00	0.00	0.00	NA
4	NAGALAMEDIKE AT PENNAR		8.09	4.67	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
5	NANDIPALLI AT SAGILERU		304.76	261.51	260.36	227.36	133.51	105.57	95.74	42.99	21.97	19.81	2.37	NA
6	NELLORE AT PENNAR		2108.70	1297.11	681.88	376.68	252.04	112.18	62.78	50.41	42.51	32.36	11.16	NA
7	SINGAVARAM AT CHITRAVATHI		25.09	16.63	5.27	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
8	TADIPATTRI AT PENNAR		222.66	107.78	62.06	40.71	24.41	1.75	1.37	1.01	0.79	0.50	0.04	NA

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

VIII Basin : East Flowing Rivers from Mahanadi to Pennar														Unit: M.C.M.
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ANAKAPALLI	6/2005 to 5/2015	1679.47	1390.84	1225.21	1102.60	944.38	807.87	687.77	480.07	391.16	356.60	109.07	82.96
2	GUNUPUR		4981.18	3103.01	3010.03	2906.39	2744.18	2667.77	2476.52	2379.84	2301.59	2130.53	1697.35	1656.14
3	KASHINAGAR		6307.46	5016.57	4295.73	3932.42	3564.90	3104.34	2912.54	2697.32	2554.57	2344.26	1985.89	1954.57
4	PURUSHOTTAMPUR		4880.81	2891.39	2836.03	2791.91	2741.16	2677.89	2368.99	2106.70	1925.33	1613.08	1070.19	1022.48
5	SRIKAKULAM		5783.13	4545.54	4218.35	3976.86	3670.12	3158.52	2669.94	2288.68	2097.66	1966.24	1743.76	1724.35

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

IX Basin : East Flowing Rivers from Pennar to Kanyakumari														<i>Unit: M.C.M.</i>
Sl. No.	Site Name	Period	Dependable flow											
(1)	(2)	(3)	10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	A.P.PURAM AT CHITTAR	6/2005 to 5/2015	77.18	57.19	37.53	22.46	6.39	3.60	3.06	2.53	1.91	0.78	0.31	NA
2	AMBASAMUDRAM AT VAIGAI		190.95	146.09	114.58	98.02	81.14	62.50	53.53	42.37	31.46	13.07	3.17	NA
3	ARCOT AT PALAR		168.33	5.76	4.34	2.69	0.20	0.00	0.00	0.00	0.00	0.00	0.00	NA
4	AVARANKUPPAM AT PALAR		187.93	19.40	18.73	17.17	12.90	10.15	6.09	2.06	0.96	0.26	0.00	NA
5	CHENGALPET AT PALAR		435.41	173.33	167.63	164.28	135.73	72.82	32.58	16.07	12.20	8.24	2.55	NA
6	GUMMANUR AT PONNAIYAR		749.21	332.62	318.00	297.69	246.49	216.63	213.57	207.45	178.88	120.41	73.35	NA
7	IRRUKKANKUDI AT VAIPPAR		42.03	18.33	18.10	17.86	17.17	11.29	2.39	0.00	0.00	0.00	0.00	NA
8	KUDALAIYATHUR AT VELLAR		986.05	476.04	454.62	373.22	205.94	202.80	92.93	8.74	3.02	2.68	0.26	NA
9	KUMARAPALAYAM AT VARAHANADI		318.68	130.18	96.57	66.34	24.33	13.14	9.09	2.02	0.00	0.00	0.00	NA
10	MAGARAL AT CHEYYAR		287.67	52.98	49.95	44.74	28.13	9.18	0.69	0.00	0.00	0.00	0.00	NA
11	MURAPPANDU AT TAMBRAPARANI		1312.03	736.40	705.28	680.49	643.38	544.22	424.64	370.77	355.57	348.52	190.47	NA
12	NAIDUPETA AT SWARNAMUKHI		869.41	396.77	358.63	311.25	225.27	159.10	82.80	52.96	44.73	33.46	24.32	NA
13	PARAMAKUDI AT VAIGAI		235.08	157.07	94.62	64.74	51.45	31.46	20.03	15.34	11.32	3.02	0.00	NA
14	SULURPET AT KALINGI		948.32	303.15	289.12	240.30	138.97	113.79	82.53	60.09	44.29	24.72	12.73	NA
15	THENI AT SURULIYAR		918.71	738.16	732.96	707.07	640.34	599.20	535.52	498.94	469.10	412.61	181.06	NA
16	VAZHAVACHANUR AT PONNAIYAR		1166.65	354.67	253.71	196.58	157.46	110.64	66.34	34.16	23.78	20.71	10.95	NA
17	VILLUPURAM AT PONNAIYAR		1709.27	357.20	256.57	209.99	172.39	70.16	15.41	7.52	4.38	1.17	0.00	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

X Basin: Narmada														<i>Unit: M. C. M.</i>
Sl. No.	Site Name	Period	Dependable flow											
(1)	(2)	(3)	10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	NARMADA AT DINDORI	2005-06 to 2014-15	1712.90	1680.40	1608.40	1492.90	1325.80	1174.50	1007.60	855.60	797.80	741.60	639.20	587.70
2	NARMADA AT MANOT		3978.00	3096.90	2894.90	2882.30	2485.00	2201.60	2169.60	2117.40	2057.00	1903.60	1404.40	1223.00
3	BURHNER AT MOHGAON		3416.30	3205.50	2946.60	2561.50	2238.40	2160.10	2081.20	1869.50	1562.50	1490.50	1256.00	637.80
4	BANJAR AT BAMNI		1381.30	977.40	977.40	784.80	716.50	632.60	553.20	519.80	502.10	489.10	456.00	270.20
5	HIRAN AT PATAN		3089.70	2925.40	2609.80	2091.50	1659.80	1510.70	1229.50	913.00	864.60	797.80	633.20	587.80
6	SHER AT BELKHEDI		1193.40	819.40	712.70	684.40	654.80	626.50	579.30	525.90	504.70	483.70	433.00	308.60
7	NARMADA AT BARMANGHAT		24845.10	22767.50	20297.20	16595.30	13805.10	12431.10	10963.00	10323.70	10059.80	9787.90	9269.70	9113.00
8	SHAKKAR AT GADARWADA		2393.40	2187.81	2148.80	2143.80	1834.00	1585.20	1451.50	1307.00	1291.10	1239.10	1039.40	798.00
9	NARMADA AT SANDIA		24845.10	22767.50	20297.20	16595.30	13805.10	12431.10	10963.00	10323.70	10059.80	9787.90	9269.70	9113.00
10	NARMADA AT HOSHANGABAD		30583.90	26156.00	24222.20	22335.80	20739.30	17171.60	13445.90	12778.10	12640.30	12549.20	12476.20	12342.20
11	GANJAL AT CHHIDGAON		2204.50	1669.20	1538.70	1530.10	1178.00	904.40	851.40	814.90	783.30	743.70	622.80	325.70
12	NARMADA AT HANDIA		32968.50	29047.20	27901.90	27053.50	25975.30	22312.70	18162.20	16796.80	16615.20	16189.61	14884.70	14826.80
13	KUNDI AT KOGAON		1566.20	1509.00	1485.40	1453.00	1196.50	1016.70	846.30	621.80	616.00	522.90	158.10	112.40
14	NARMADA AT MANDLESHWAR		47455.20	44977.60	42105.90	37172.30	33532.30	30879.70	28303.10	27186.20	25866.90	25007.30	23671.40	16209.60
15	URI AT DHULSAR		195.10	164.90	153.10	139.40	123.90	99.40	63.10	37.00	34.00	25.80	0.10	0.10
16	GOI AT PATI		608.90	452.20	398.40	368.20	309.60	270.90	246.10	196.40	148.20	97.20	0.10	0.10
17	NARMADA AT GARUDESCHAWAR		34184.10	27046.40	25424.50	24969.90	23008.00	21814.90	17042.50	9498.70	8724.70	7984.80	6519.60	4492.30
18	ORSANG AT CHANDWADA		2288.90	1597.50	1407.30	1350.00	1187.20	1030.90	897.90	780.80	739.40	693.20	572.80	323.10
19	NARMADA AT BIJORA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Source SE(C),Govt. of India, CWC, Office of the Chief Eng., Narmada Basin Oraganistion, Bhopal (MP) 2014-15 Narmada Basin.

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

XI Basin : Tapi														Unit : M.C.M
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	MOTINAROLI	2005-06 to 2014-15	1268.59	778.88	700.51	656.30	609.66	510.09	409.02	329.49	278.39	214.95	97.41	NA
2	GIDHADE		11458.84	9042.44	7798.83	7120.39	5474.49	4922.31	4826.07	4128.85	3561.69	3306.70	2629.94	NA
3	PURNA AT GOPALKHEDA		1986.21	1727.16	1504.29	1359.27	1111.16	912.55	628.61	453.77	389.36	358.14	283.59	NA
4	PURNA AT YERLI		3879.80	3403.10	2933.30	2649.83	2253.86	1799.03	1234.93	1062.24	974.10	763.87	571.71	NA
5	SARANGKHEDA		14652.22	12045.33	10809.81	8880.03	8097.43	6861.19	6202.43	4226.40	3710.71	3366.11	3153.79	NA
6	TAPI AT BURHANPUR		8820.00	6690.52	6373.81	5552.22	4904.63	4041.15	3892.63	3232.21	2935.22	2357.27	1645.03	NA

Source: Executive Engineer Tapi Division Surat.

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

XII Basin : West Flowing Rivers from Tapi to Tadri														Unit: M.C.M.
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	SANTEGULI AT AGHANASHINI	2005-06 to 2014-15	4564.54	3918.86	3772.31	3649.10	3455.94	3335.38	3189.87	2854.72	2732.83	2707.37	2521.01	NA
1	AMBICA AT GADAT		2924.41	2146.52	2132.10	2026.19	1769.76	1516.09	1239.25	1172.37	1046.57	795.09	642.25	NA
2	DURVESH		5308.23	4902.76	4529.88	4276.81	3980.84	3787.11	3718.60	3189.14	2843.78	2566.74	2114.66	NA
4	NANIPALSON		2009.18	1670.64	1496.52	1387.96	1224.02	1029.55	959.20	900.02	849.62	782.69	668.23	NA
5	OZERKHEDA		1677.26	1460.40	1443.70	1403.81	1241.73	1081.36	1035.81	940.66	888.69	854.45	619.81	NA
7	PURNA AT MAHUWA		3310.24	2445.95	2155.20	1942.74	1672.12	1236.44	885.11	657.26	559.65	534.24	512.96	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari														<i>Unit: M.C.M.</i>
Sl. No.	Site Name	Period	Dependable flow											
			10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ADDOOR AT GURPUR	6/2005 to 5/2015	2719.40	2668.96	2659.64	2642.50	2578.37	2523.42	2373.41	2099.47	2023.01	2021.21	1893.56	NA
2	AMBARAMPALAYAM AT ALIYAR		427.49	423.31	416.09	412.31	405.34	387.23	349.41	306.15	288.01	271.04	218.01	NA
3	ARANGALY AT CHALAKUDY		3124.56	2548.19	2278.19	2138.61	2074.35	1913.11	1716.23	1629.78	1548.91	1406.59	974.37	NA
4	ASHRAMAM AT PAZHAYAR		222.15	167.27	166.93	164.60	155.19	128.17	101.69	84.12	71.74	57.31	18.11	NA
5	AVERSHE AT SITA		1458.97	1377.78	1368.03	1356.85	1321.19	1269.58	1219.02	1180.09	1156.74	1123.94	1100.56	NA
6	AYILAM AT VAMANAPURAM		998.34	853.87	851.29	837.54	716.53	550.05	512.29	487.79	479.50	478.87	82.49	NA
7	BANTWAL AT NETRAVATHI		14821.23	13549.18	13288.97	12913.69	12249.04	12058.54	11930.15	11257.54	10951.53	10890.22	9445.12	NA
8	ERINJIPUZHA AT PAYASWANI		3131.66	2981.03	2844.04	2732.92	2512.42	2350.18	2321.98	2106.61	1958.01	1818.01	1701.49	NA
9	HALADI AT HALADI		2492.51	2400.26	2374.25	2360.01	2335.69	2227.59	2139.20	2010.38	1931.35	1873.70	1810.84	NA
10	KALAMPUR AT KALIYAR		1530.17	1490.60	1475.10	1453.31	1362.67	1222.46	1100.37	947.91	874.77	816.00	726.12	NA
11	KALLOOPARA AT MANIMALA		2270.33	2241.43	2168.85	2112.86	2040.87	1898.93	1781.41	1555.33	1402.56	1277.71	898.23	NA
12	KARATHODU AT KADALUNDI		2573.99	1967.40	1889.55	1799.23	1577.26	1420.40	1401.02	1317.12	1184.94	971.22	646.73	NA
13	KIDANGOOR AT MEENACHIL		2338.91	2238.94	2194.16	2167.51	2092.71	1858.99	1688.47	1552.85	1452.67	1343.22	1070.98	NA
14	KUMBIDI AT BHARATHAPUZHA		8197.31	6288.37	6145.20	6058.44	5901.20	5658.45	5286.71	4963.74	4389.26	3248.28	2303.81	NA
15	KUNIYIL AT CHALIYAR		6912.07	6091.61	5900.49	5602.84	5108.42	4860.23	4532.71	4052.05	3699.57	3324.99	2855.65	NA
16	KUTTYADY AT KUTTYADI		1795.34	1660.86	1589.49	1516.10	1408.52	1386.19	1341.24	1150.03	1076.65	1069.93	914.14	NA
17	KUZHITHURAI AT THAMBRAPARNI		279.31	237.48	202.47	176.12	140.88	84.49	20.36	3.50	2.36	0.63	0.00	NA
18	MALAKKARA AT PAMBA		5051.80	4572.04	4556.78	4545.27	4422.08	4145.95	3771.05	3378.48	3023.59	2444.83	1773.18	NA
19	MANKARA AT BHARATHAPUZHA		1588.68	1016.53	982.61	936.04	846.50	814.89	761.39	668.94	591.72	479.33	270.66	NA
20	NEELESWARAM AT PERIYAR		9999.30	9377.30	9338.94	8934.92	7823.37	7499.14	7209.55	6786.98	6414.73	5818.40	4123.72	NA
21	PATTAZHY AT KALLADA		2399.33	1729.81	1703.49	1611.46	1310.08	1125.05	1041.59	954.77	844.17	638.56	545.03	NA
22	PERUMANNU AT VALAPATNAM		5522.38	5269.50	4980.80	4817.55	4707.69	4364.49	3791.48	3354.17	3208.90	3124.03	2914.35	NA
23	PUDUR AT KANNADIPUZHA		587.12	451.73	409.88	386.15	366.69	341.10	324.01	288.97	248.69	190.47	112.24	NA
24	PULAMANTHOLE AT PULANTHODU		2738.12	2225.18	2191.35	2175.25	2154.59	2101.52	2061.13	1878.55	1666.61	1362.59	940.60	NA
25	RAMAMANGALAM AT MUVATTUPUZHA		6599.68	6193.03	6142.55	6007.31	5697.82	5533.81	5130.51	4708.54	4360.10	3796.28	3219.75	NA
26	THUMPAMON AT ACHANKOVIL		1398.92	1377.33	1343.51	1312.82	1273.73	1257.51	1083.77	820.71	745.81	726.87	437.32	NA
27	VANDIPERIYAR AT PERIYAR		327.89	267.89	265.63	245.08	182.26	150.53	140.95	131.00	122.58	111.05	68.54	NA
28	YENNEHOLE AT YENNEHOLE		1750.02	1715.36	1706.71	1652.51	1528.41	1497.40	1452.68	1363.29	1326.74	1315.58	1203.14	NA

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

XIV Basin : Mahi														<i>Unit: M. C. M.</i>
Sl. No.	Site Name	Period	Dependable flow											
(1)	(2)	(3)	10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ANAS AT CHAKALIYA	6/2005 to 5/2015	4592.60	1824.57	1541.65	1357.67	1186.94	940.49	671.93	556.24	512.45	472.18	406.70	Note : As the rivers are Non-perinnial 100% dependability is not calculated
2	JAKHAM AT DHARIAWAD		1123.47	912.42	844.49	738.28	397.45	136.84	121.60	115.56	111.63	107.29	63.88	
3	MAHI AT KHANPUR		20570.45	8437.41	7476.11	6948.55	6047.99	3896.59	2434.06	1415.79	1025.32	909.62	584.83	
4	MAHI AT MATAJI		3998.36	3390.32	3122.91	2769.92	2201.92	1613.49	1038.47	798.60	683.71	639.20	312.39	
5	MAHI AT PADERDIBADI		10229.22	3622.25	3196.64	2987.05	2409.82	1480.09	1102.09	665.53	515.73	435.82	323.24	
6	SOM AT RANGELI		3027.12	1828.02	1464.13	1194.82	873.23	635.87	428.72	295.83	255.34	235.92	217.85	
2	PINGALWADA		1216.09	966.29	848.52	766.08	677.51	637.01	566.93	396.56	329.02	302.55	133.55	

Source: SE, Mahi Division, CWC, Gandhi Nagar (2014-15) (Mahi and Sabarmati Basin)

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

XV Basin : Sabarmati														<i>Unit: M. C. M.</i>
Sl. No.	Site Name	Period	Dependable flow											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	SABARMATI AT DEROL BRIDGE	6/2005 to 5/2015	2647.14	619.50	418.02	275.70	118.91	55.59	42.68	33.47	30.18	27.12	15.26	Note : As the rivers are Non-perinnial 100% dependability is not calculated
2	SABARMATI AT KHEROJ		1073.89	610.04	537.30	493.40	465.54	349.43	194.54	155.51	145.30	132.82	122.03	
3	SABARMATI AT VOUTHA		6444.94	5308.35	4508.16	3996.38	3421.88	2486.26	1856.47	1453.18	1285.19	1272.16	949.08	
4	WAKAL AT KOTRA(JOTASAN)		1010.27	362.86	343.06	299.93	208.18	187.57	175.43	135.14	116.38	107.00	66.04	
5	WATRAK AT GADVEL (RATANPUR)		1612.22	509.28	419.88	364.26	308.53	216.06	149.31	103.12	76.59	58.37	44.77	
6	WATRAK AT KHEDA		2429.57	908.50	883.43	717.47	352.24	287.73	181.84	136.90	120.92	97.80	65.38	

Source: SE, Mahi Division, CWC, Gandhi Nagar (2014-15) (Mahi and Sabarmati Basin)

Table 7 : Annual dependable flow of water by site and river basin from 2005-06 to 2014-15

XVI Basin : WFR of Kutch, Saurashtra Including Luni														<i>Unit: M. C. M.</i>
Sl. No.	Site Name	Period	Dependable flow											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	BALARAM AT CHITRASANI	6/2005 to 5/2015	121.05	91.93	60.92	41.58	27.96	22.05	12.96	7.10	5.81	5.21	4.25	Note : As the rivers are Non-perinnial 100% dependability is not calculated
2	BANAS AT ABU ROAD		471.76	243.43	206.40	177.37	113.65	56.26	46.16	22.36	12.80	10.69	9.28	
3	BANAS AT KAMALPUR		517.41	194.78	141.48	113.37	100.82	94.59	84.04	53.41	36.85	23.28	11.53	
4	BANAS AT SAROTRY		699.95	483.00	374.05	303.02	197.53	113.37	88.22	61.89	47.03	24.13	6.57	
5	BHADAR AT GANOD		1955.41	1031.22	872.30	798.54	758.02	667.17	403.61	216.42	151.03	40.28	0.00	
6	LUNI AT BALOTRA		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	LUNI AT GANDHAV		204.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	MACHHU AT GUNGAN		631.90	604.96	582.88	530.17	373.93	203.83	114.79	43.16	12.02	8.54	0.73	
9	SHESTRUNJI AT LOWARA		1248.63	1060.22	1056.80	927.34	606.24	538.97	457.90	251.73	164.47	136.89	61.25	

Source: SE, Mahi Division, CWC, Gandhi Nagar (2014-15) (Mahi and Sabarmati Basin)

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

I Basin : Mahanadi												Unit : Millimeter		
Sl.No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ANDHIARKHORE	11/1977 to 5/2015	6.89	26.76	41.25	42.23	16.55	6.40	3.81	2.83	2.30	1.45	0.79	0.58
2	BAMNIDHI	6/1971 to 5/2015	25.73	101.40	139.49	95.96	27.92	14.85	13.28	10.42	8.12	7.39	7.40	6.71
3	BARONDA	12/1977 to 5/2015	19.24	87.98	164.03	105.74	27.58	5.04	1.43	0.68	0.57	0.32	0.18	0.59
4	BASANTPUR	6/1971 to 5/2015	13.08	74.06	134.76	94.26	32.15	10.47	4.91	3.53	2.82	2.16	1.65	1.31
5	GHATORA	9/1979 to 5/2015	11.81	60.32	100.79	90.07	26.67	7.05	3.63	3.31	1.74	1.08	0.59	0.55
6	JONDHRA	7/1979 to 5/2015	8.58	54.49	104.13	83.00	29.86	8.56	2.53	1.69	1.33	0.71	0.37	0.34
7	KANTAMAL	9/1971 to 5/2015	25.35	110.82	184.54	125.99	43.90	18.91	9.25	5.34	3.79	3.37	3.33	5.26
8	KESINGA	11/1978 to 5/2015	36.78	120.33	188.21	120.81	46.40	19.32	10.72	5.70	5.31	5.51	6.06	10.50
9	KOTNI	9/1978 to 5/2015	14.25	57.04	113.22	66.02	24.74	4.66	1.09	0.80	0.91	0.20	0.15	0.34
10	KURUBHATA	4/1978 to 5/2015	22.34	119.95	160.68	123.83	39.00	15.30	8.29	7.02	3.83	2.41	0.87	1.22
11	MANENDRAGARH	6/1989 to 5/2015	16.35	80.39	91.86	73.28	23.35	6.95	5.11	3.94	2.98	3.10	1.73	0.35
12	PATHARDIH	1/1989 to 5/2015	12.02	96.14	159.13	104.15	41.02	6.50	1.83	1.52	1.91	1.21	1.26	1.77
13	RAJIM	6/1971 to 5/2015	13.38	66.41	129.32	81.49	24.36	5.16	1.21	0.62	0.51	0.31	0.23	0.39
14	RAMPUR	6/1971 to 5/2015	22.66	103.02	178.85	120.15	27.55	6.57	1.42	0.93	0.71	0.79	0.85	0.33
15	SALEBHATA	12/1971 to 5/2015	16.97	90.39	171.25	106.84	24.79	5.17	1.17	1.14	1.37	1.11	0.67	0.51
16	SEORINARAYAN	12/1985 to 5/2015	10.68	70.08	120.48	93.77	32.49	8.80	2.73	1.74	1.31	0.70	0.42	0.36
17	SIMGA	9/1971 to 5/2015	4.62	31.58	60.93	43.87	15.75	3.86	1.33	0.91	0.73	0.41	0.28	0.26
18	SUNDERGARH	12/1977 to 5/2015	33.99	138.60	159.88	135.27	40.44	15.35	5.89	6.05	3.11	1.92	0.81	0.99
19	TIKARAPARA	5/1972 to 5/2015	13.38	69.32	125.16	91.59	32.15	12.45	7.61	6.82	6.11	6.58	6.49	6.31

Source: Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

II Basin : Subernarekha												Unit : Millimeter		
Sl.No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ADITYAPUR	11/1971 to 5/2015	32.63	80.04	142.98	113.33	45.88	10.54	3.44	2.69	2.10	1.53	1.32	1.96
2	GHATSILO	6/1971 to 5/2015	34.89	84.58	140.18	124.45	54.70	17.25	7.58	4.75	3.62	2.97	2.60	3.39
3	GOVINDPUR	3/1992 to 5/2015	42.20	98.50	181.89	212.81	124.58	47.51	15.81	6.79	5.22	4.70	4.82	9.09
4	JAMSHEDPUR	2/1972 to 5/2015	32.90	95.26	162.89	141.95	65.39	21.33	8.59	5.27	3.22	2.14	1.91	2.59
5	MURI	11/1989 to 5/2015	12.89	60.60	98.07	102.52	73.02	46.54	36.61	23.58	15.26	9.63	5.67	4.61

Source: Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

III Basin : Brahmani & Baitarani												Unit : Millimeter		
Sl.No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ALTUMA	7/1990 to 5/2015	38.44	128.35	224.84	183.79	96.72	25.95	6.42	7.68	8.61	11.30	14.05	10.72
2	GOMLAI	1/1979 to 5/2015	31.56	111.22	151.18	118.27	42.83	12.41	5.36	4.45	3.07	2.50	1.71	2.31
3	JARAIKELA	8/1972 to 5/2015	32.90	106.78	147.63	119.64	45.51	14.04	6.72	5.18	3.74	2.53	1.45	2.26
4	JENAPUR	7/1979 to 5/2015	20.67	84.22	129.22	110.10	51.89	21.31	14.57	12.71	9.91	11.46	11.56	11.91
5	PANPOSH	6/1996 to 5/2015	30.19	112.68	162.78	138.11	54.71	15.08	6.78	6.47	3.92	3.15	2.29	2.68
6	TILGA	6/1979 to 5/2015	35.51	144.77	172.44	145.76	57.92	19.77	9.11	7.55	4.72	3.19	1.67	2.11
7	ANANDPUR	3/1972 to 5/2015	40.68	90.67	170.85	140.45	69.52	21.00	7.15	5.26	3.76	2.97	2.52	5.58
8	CHAMPUA	7/1990 to 5/2015	35.78	103.89	167.96	153.02	84.22	32.74	15.02	12.54	8.87	7.58	6.15	7.72

Source: Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

IV Basin : Godavari														
Unit : Millimeter														
Sl.No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	AMBABAL AT NARANGI	2014-15	216.25	467.83	713.55	619.41	255.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	BETMOGRA AT MANER		0.00	22.00	82.00	39.00	36.00	4.00	0.00	0.00	2.00	4.00	0.00	0.00
3	BHADRACHALAM AT GODAVARI		16882.00	58607.00	74941.00	52512.00	21310.00	5481.00	1923.00	1483.00	951.00	1115.00	451.00	321.00
4	CHERRIBEDA AT BARDHA		177.00	885.00	1059.00	840.00	324.00	53.00	15.00	9.00	4.00	2.00	0.00	0.00
5	CHINDNAR AT INDRAVATHI		3024.00	5378.00	7373.00	8903.00	3385.00	671.00	170.00	101.00	46.00	53.00	44.00	60.00
6	DEGLOOR AT LENDI		0.00	81.00	100.00	66.00	58.00	13.00	5.00	0.00	0.00	2.00	0.00	0.00
7	DHALEGAON AT GODAVARI		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	G.R.BRIDGE AT GODAVARI		0.00	142.00	158.00	364.00	273.00	55.00	0.00	0.00	0.00	0.00	0.00	0.00
9	GANDLAPET AT PEDDAVAGU		29.00	104.00	106.00	61.00	58.00	26.00	0.00	0.00	0.00	0.00	0.00	0.00
10	JAGDALPUR AT INDRAVATHI		952.00	1251.00	1704.00	2516.00	933.00	95.00	16.00	0.00	0.00	0.00	0.00	0.00
11	KIWAIBALENGA AT BAWARDHI		264.00	364.00	584.00	384.00	267.00	41.00	3.00	1.00	0.00	0.00	0.00	0.00
12	KONTA AT SABARI		5685.00	10783.00	9627.00	13229.00	6113.00	2713.00	1920.00	1517.00	1207.00	1745.00	1766.00	1967.00
13	KOSAGUMDA AT BHASKAL		521.00	1951.00	315.00	878.00	294.00	62.00	28.00	12.00	8.00	11.00	11.00	14.00
14	MANCHERIAL AT GODAVARI		213.00	1715.00	2943.00	1931.00	1508.00	372.00	263.00	160.00	133.00	240.00	102.00	93.00
15	MURTHAHANDI AT JOURNALA		429.00	686.00	767.00	891.00	574.00	178.00	93.00	79.00	67.00	59.00	76.00	82.00
16	NOWRANGPUR AT INDRAVATHI		309.00	603.00	661.00	1026.00	563.00	104.00	61.00	46.00	28.00	24.00	17.00	18.00
17	PACHEGAON AT PRAVARA		0.00	0.00	161.00	69.00	0.00	231.00	186.00	1.00	0.00	10.00	0.00	0.00
18	PATHAGUEDEM AT INDRAVATHI		8279.00	18128.00	24343.00	21690.00	7404.00	1741.00	599.00	325.00	144.00	122.00	69.00	95.00
19	PERUR AT GODAVARI		18266.00	60613.00	80051.00	14833.00	21951.00	4313.00	1682.00	1280.00	893.00	1187.00	409.00	317.00
20	POLAVARAM AT GODAVARI		20568.00	58149.00	74630.00	58981.00	26434.00	7538.00	3347.00	2921.00	2242.00	2843.00	2452.00	2641.00
21	POTTERU (SEASONAL) AT POTTERU V		886.00	986.00	1263.00	1295.00	773.00	487.00						
22	PURNA AT PURNA		21.00	479.00	308.00	398.00	280.00	4.00	6.00	2.00	0.00	0.00	1.00	4.00
23	SAIGAON AT MANJERA/GODAVARI		0.00	48.00	60.00	42.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	SANGAM AT MURREDU		103.00	79.00	132.00	185.00	87.00	39.00	25.00	8.00	3.00	0.00	1.00	18.00
25	SARADAPUT AT SABARI		1959.00	2813.00	3430.00	3644.00	1945.00	673.00	394.00	275.00	262.00	282.00	385.00	544.00
26	SOMANPALLY (SEASONAL) AT MANE		136.00	624.00	660.00	598.00	989.00	155.00		0.00	0.00	0.00	0.00	0.00
27	SONARPAL AT MARKANDI		250.00	369.00	444.00	589.00	259.00	40.00	4.00	1.00	0.00	0.00	0.00	0.00
28	TUMNAR AT DANTEWARA		440.00	486.00	1104.00	873.00	453.00	188.00	59.00	33.00	16.00	17.00	14.00	18.00
29	YELLI AT GODAVARI		0.00	797.00	816.00	697.00	381.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
30	ZARI AT DUDHNA		0.00	135.00	31.00	170.00	28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source : SE, Godavari Circle, Central Water Commission, Hyderabad, Wainganga Division, C.GO complex, Block-C, 2nd Floor, Seminary Hills Nagpur

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

V Basin : Krishna Unit: Millimeter														
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ARJUNWAD (SEASONAL)	01/1969 to 11/2014	32.60	197.25	233.70	88.36	36.30	3.36	0.15	0.03	0.02	0.03	0.43	0.17
2	BAWAPURAM	06/1965 to 05/2015	2.08	6.25	28.40	19.80	16.10	5.06	1.30	0.56	0.37	0.32	0.31	0.88
3	CHOLACHGUDA (SEASONAL)	06/1982 to 11/2014	8.79	4.71	10.94	19.96	21.42	8.51	5.06	4.01	2.48	1.43	0.78	2.45
4	DAMERACHERLA	07/1968 to 05/2015	0.82	2.97	11.79	18.37	23.79	11.35	4.74	4.64	4.75	5.11	3.23	1.03
5	DODDIPADU	11/2014 to 05/2016	0.00	0.00	0.00	7.92	13.11	6.42	0.37	0.34	0.15	0.00	0.00	0.00
6	GOKAK FALLS (SEASONAL)	07/1971 to 11/2014	32.88	217.02	279.47	78.39	32.20	11.35	6.10	4.53	2.89	2.55	2.53	2.85
7	HALIA	07/1984 to 05/2015	1.00	2.01	4.33	15.39	21.64	7.34	2.59	1.59	1.34	1.42	1.07	0.55
8	HUVINHEDIGI	02/1976 to 05/2015	8.98	75.01	113.70	50.60	27.29	5.27	2.87	2.33	2.09	1.91	1.24	1.25
9	KARAD	06/1965 to 05/2015	48.07	256.36	289.13	111.21	42.78	14.17	11.84	11.12	11.17	12.92	13.46	13.58
10	KEESARA	01/1965 to 05/2015	2.45	21.35	57.85	49.05	34.04	12.77	5.58	2.67	1.45	1.37	0.92	3.92
11	KURUNDWAD	05/1972 to 05/2015	41.65	257.21	297.78	104.41	40.12	4.05	0.51	0.07	0.03	0.10	0.09	0.17
12	MADHIRA	06/1984 to 05/2015	3.08	21.45	70.35	70.85	53.85	26.67	14.95	8.62	6.10	5.39	3.87	5.88
13	MALKHED	08/1990 to 05/2015	2.32	9.20	23.41	35.95	28.41	4.70	2.13	1.60	0.99	1.13	0.56	0.51
14	MANTRALAYAM	06/1972 to 05/2015	2.35	8.33	34.56	24.79	20.13	8.12	3.04	2.17	1.76	1.89	1.30	0.92
15	NARASINGPUR	12/1966 to 05/2015	6.15	48.94	76.26	45.90	21.02	3.29	1.72	1.15	0.72	1.02	0.75	0.98
16	PALERU BRIDGE	06/1965 to 05/2016	3.04	10.97	26.07	28.40	29.58	14.50	8.08	5.10	4.33	4.98	4.13	3.36
17	PHULGAON (SEASONAL)	06/1992 to 11/2014	18.63	188.09	244.38	105.84	23.25	2.23	0.00	0.00	0.00	0.00	0.00	0.00
18	SADALGA (SEASONAL)	06/1969 to 11/2014	67.57	410.58	439.31	135.07	54.60	4.03	0.00	0.03	0.00	0.00	0.00	0.09
19	SAMDOLI (SEASONAL)	12/1964 to 11/2014	91.53	567.90	614.51	204.73	68.65	3.29	0.63	0.05	0.01	0.00	0.01	0.13
20	SARATI	06/1965 to 05/2015	5.46	36.39	56.64	40.23	22.37	4.23	2.24	1.17	0.57	0.25	0.09	1.06
21	T. RAMAPURAM (SEASONAL)	12/1965 to 05/2015	1.29	1.07	3.12	9.45	10.52	4.66	2.42	1.18	0.58	0.26	0.16	0.67
22	TAKLI	06/1965 to 05/2015	4.20	30.36	52.92	38.55	21.53	3.33	1.50	0.78	0.39	0.27	0.16	0.50
23	TALIKOT (SEASONAL)	09/1995 to 11/2014	11.02	3.99	10.35	26.53	34.13	2.41	0.81	0.31	0.13	0.07	0.04	2.01
24	TERWAD (SEASONAL)	08/1979 to 11/2014	100.86	658.77	711.35	223.19	65.40	0.82	0.05	0.00	0.11	0.07	0.07	0.03
25	VIIJAYAWADA	01/1965 to 05/2015	0.87	7.38	28.09	20.70	17.23	3.90	1.53	1.03	0.87	1.16	1.22	1.34
26	WADAKBAL	06/1965 to 05/2015	3.57	4.87	9.92	29.12	16.29	3.61	1.13	0.51	0.30	0.14	0.11	0.66
27	WADENAPALLY	12/1965 to 05/2015	1.90	10.14	32.00	24.64	20.76	5.72	3.03	2.95	2.67	3.11	2.29	1.35
28	WARUNJI	01/1966 to 05/2015	89.52	439.50	521.25	199.25	63.23	21.09	22.60	26.14	27.98	33.55	34.93	32.43
29	YADGIR	06/1965 to 05/2015	3.91	15.76	33.99	33.58	24.98	5.08	1.86	0.81	0.45	0.33	0.12	0.49
30	BYLADAHALLI	06/1985 to 05/2015	5.24	12.23	29.40	26.14	36.36	22.54	3.89	1.90	1.58	2.21	5.19	7.13
31	HARALAHALLI	12/1966 to 05/2015	29.52	129.17	156.76	68.37	46.30	25.57	9.88	4.22	3.95	3.66	5.08	7.96
32	HOLEHONNUR	06/2004 to 05/2015	19.82	85.95	164.36	112.40	69.50	42.73	15.24	22.21	40.18	38.60	39.94	38.14
33	HONNALI	06/1980 to 05/2015	66.44	272.75	321.68	130.83	78.47	37.41	16.81	9.74	10.67	9.65	11.53	11.74
34	HOOVINAHOLE	06/2005 to 05/2015	0.03	0.08	0.24	2.09	1.85	2.71	0.33	0.01	0.00	0.00	0.00	0.30
35	KELLODU	07/1990 to 05/2015	0.58	0.31	0.72	2.45	10.57	4.98	0.68	0.17	0.07	0.04	0.05	0.27
36	KUPPELUR	07/1990 to 05/2015	8.44	43.13	74.92	35.47	37.59	16.29	2.69	0.18	0.04	0.07	0.34	0.23

Source :SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

VI Basin : Cauvery													Unit: Millimeter	
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	AKKHEBBAL	1/2002 to 5/2015	4.48	28.41	64.17	33.29	34.29	23.69	16.66	6.13	3.04	3.94	5.89	5.88
2	ANNAVASAL	2/1999 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	BENDRAHALLI	8/2005 to 5/2015	0.25	0.25	1.24	3.20	5.47	6.30	3.16	0.92	0.46	0.39	0.32	0.32
4	BILIGUNDULU	8/1971 to 5/2015	7.77	32.47	45.74	31.15	30.63	19.86	11.41	5.52	3.77	3.61	4.10	5.63
5	CHUNCHUNKATTE	6/2008 to 5/2015	43.87	189.82	201.05	117.84	53.76	40.56	25.05	3.46	0.33	0.00	0.00	0.14
6	ELUNUTHIMANGALAM	8/1998 to 5/2015	0.51	0.81	1.06	1.06	4.59	8.58	6.08	2.61	0.98	0.85	0.70	0.86
7	GANDHAVAYAL	6/2013 to 5/2015	0.50	0.02	0.36	2.11	47.05	248.90	48.56	8.86	10.73	121.58	1.19	35.74
8	GOPURAJAPURAM	2/1999 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9	HOGENAKKAL	10/1996 to 5/2015	0.14	0.02	0.95	1.42	12.40	7.00	3.83	1.25	0.45	0.19	0.30	0.52
10	K.M.VADI	6/1979 to 5/2015	28.60	90.78	69.70	24.08	16.93	9.59	3.67	1.05	0.16	0.12	0.19	0.50
11	KODUMUDI	6/1971 to 5/2015	5.23	18.15	27.75	26.53	22.46	17.11	14.88	13.72	4.82	3.08	2.47	2.30
12	KOLLEGAL	6/1971 to 5/2015	13.28	60.18	81.90	42.36	36.18	25.06	15.01	8.18	5.58	5.36	6.05	7.43
13	KUDIGE	11/1973 to 5/2015	138.31	443.18	439.99	157.59	93.10	48.95	25.35	14.47	10.16	7.44	8.94	13.72
14	KUDLUR	3/1999 to 5/2015	0.89	0.25	1.40	3.33	9.11	17.41	7.14	3.23	2.76	1.41	2.48	2.51
15	M.H.HALLI	10/1978 to 5/2015	15.59	60.45	95.54	51.87	38.44	30.95	21.45	14.40	15.20	15.62	17.61	16.81
16	MENANGUDI	8/1996 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
17	MUSIRI	6/1972 to 5/2015	3.21	12.19	20.61	20.45	18.01	15.84	11.95	9.85	2.76	1.41	0.79	0.66
18	MUTHANKERA	6/1973 to 5/2015	271.39	606.45	532.37	224.91	145.76	85.65	40.06	19.76	9.68	7.34	13.25	23.03
19	NALLAMARANAPATTY	12/1977 to 5/2015	0.16	0.68	1.35	1.06	2.18	15.46	9.34	1.47	0.63	0.44	0.06	0.13
20	NALLATHUR	6/2006 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
21	NELLITHURAI	6/1979 to 5/2015	104.89	191.77	155.57	92.85	104.20	118.56	52.72	33.07	26.15	31.99	21.16	21.52
22	PERALAM	2/1999 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
23	PORAKUDI	2/1999 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
24	SAKLESHPUR	4/2002 to 5/2015	168.48	523.36	539.31	283.29	164.81	94.13	48.59	26.11	12.82	8.61	6.80	12.41
25	SAVANDAPUR	6/1978 to 5/2015	5.41	12.62	11.21	9.87	11.64	19.85	11.76	9.60	6.70	7.40	6.27	4.31
26	SEVANUR	9/1999 to 5/2015	0.02	0.02	0.18	1.95	12.68	6.72	6.02	2.46	0.52	0.28	0.18	0.02
27	T. BEKUPPE	9/2003 to 5/2015	4.97	6.47	7.65	10.57	10.14	5.76	3.96	2.69	1.81	2.15	2.72	5.26
28	T.K.HALLI	6/1978 to 5/2015	2.81	2.71	7.63	20.49	24.10	14.10	7.39	2.68	1.38	1.37	1.47	2.37
29	T.NARASIPUR	6/1971 to 5/2015	28.31	102.41	106.73	51.92	39.14	26.64	15.16	6.66	5.64	6.79	9.87	14.04
30	THENGUDI	7/1997 to 5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
31	THENGUMARAHADA	6/1979 to 5/2015	14.89	27.70	32.56	24.33	29.09	31.32	16.34	10.80	10.42	12.34	11.63	11.51
32	THEVUR	9/1999 to 5/2015	0.00	0.00	0.03	0.64	3.35	3.39	2.03	0.57	0.06	0.03	0.02	0.02
33	THIMMANAHALLI	6/2000 to 5/2015	7.33	26.12	42.95	35.27	36.86	25.93	6.44	3.42	2.39	4.02	4.23	4.53
34	THOPPUR	10/1999 to 5/2015	0.04	0.07	0.15	0.38	2.07	3.30	5.07	1.42	0.23	0.23	0.18	0.22
35	URACHIKOTTAI	6/1979 to 5/2015	6.77	18.72	29.27	28.50	24.04	14.11	14.10	14.01	3.17	2.27	2.04	1.65

Source : SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

VII Basin : Pennar													Unit: Millimeter	
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ALLADUPALLI	8/1985 to 5/2015	5.12	9.72	28.38	40.76	52.57	18.55	13.10	7.52	3.51	1.80	0.55	0.89
2	CHENNUR	7/1989 to 5/2015	2.07	3.12	7.11	13.78	20.14	6.75	4.10	1.81	0.91	0.44	0.10	0.24
3	KAMALAPURAM	6/1990 to 5/2015	0.68	0.03	0.66	3.16	7.21	6.31	1.56	0.24	0.03	0.00	0.01	0.00
4	NAGALAMEDIKE	7/1978 to 5/2015	0.00	0.08	0.43	3.69	1.43	0.67	0.04	0.01	0.01	0.00	0.00	0.05
5	NANDIPALLI	6/1990 to 5/2015	3.89	0.83	2.80	3.51	18.28	11.37	5.48	1.66	0.77	0.30	0.21	0.16
6	NELLORE	8/1987 to 5/2015	0.13	0.24	0.86	3.43	8.89	6.86	3.22	0.36	0.03	0.03	0.02	0.13
7	SINGAVARAM	9/1979 to 5/2015	0.36	0.89	0.65	4.75	3.84	1.77	0.23	0.06	0.01	0.03	0.00	0.00
8	TADIPATTRI	12/1971 to 5/2015	0.26	0.74	0.77	4.94	6.77	4.73	1.05	0.43	0.09	0.02	0.01	0.12

Source : SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

VIII Basin : East Flowing Rivers from Mahanadi to Pennar													Unit: Millimeter	
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ANAKAPALLI	8/1989 to 5/2015	8.18	15.04	27.56	61.82	90.64	57.60	17.90	5.94	2.65	1.30	1.23	2.50
2	GUNUPUR	6/1989 to 5/2015	8.45	51.64	85.84	82.02	51.11	21.42	9.88	5.81	3.65	2.74	2.69	3.98
3	KASHINAGAR	6/1971 to 5/2015	10.27	38.73	83.45	86.74	59.88	23.96	9.60	5.36	3.04	2.32	2.00	5.73
4	PURUSHOTTAMPUR	6/1989 to 5/2015	7.37	30.67	69.75	74.92	84.50	29.45	7.15	2.69	1.33	0.78	0.53	7.87
5	SRIKAKULAM	8/1990 to 5/2015	9.79	31.16	55.14	69.97	53.99	26.58	12.19	5.64	2.62	1.46	1.63	4.74

Source: Mahanadi & Eastern Rivers Organisation, CWC, Bhubaneswar

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

IX Basin : East Flowing Rivers from Pennar to Kanyakumari													Unit: Millimeter	
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	A.P.PURAM	12/1979 to 5/2015	0.111	0.468	0.360	0.053	0.705	8.080	6.466	1.528	0.537	3.177	0.281	0.197
2	AMBASAMUDRAM	1/1999 to 5/2015	0.186	0.391	0.869	1.080	12.721	28.450	20.544	6.191	2.878	5.408	2.274	0.572
3	ARCOT	9/1979 to 5/2015	0.004	0.001	0.036	1.541	1.938	5.203	2.091	0.160	0.048	0.036	0.000	0.001
4	AVARANKUPPAM	6/1978 to 5/2015	0.173	0.161	0.456	3.583	5.411	4.143	1.645	0.297	0.095	0.048	0.032	0.090
5	CHENGALPET	10/1978 to 5/2015	0.043	0.043	0.077	0.300	1.140	7.694	6.198	0.478	0.152	0.099	0.003	0.002
6	GUMMANUR	9/1978 to 5/2015	1.852	1.322	2.608	10.693	15.045	8.303	3.228	1.331	0.511	0.301	0.299	1.239
7	IRRUKKANKUDI	11/1989 to 5/2015	0.005	0.027	0.015	0.019	2.026	7.411	4.152	0.247	0.101	0.063	0.178	0.014
8	KUDALAIYATHUR	11/1989 to 5/2015	0.000	0.000	0.000	0.018	1.318	21.376	17.602	1.279	0.090	0.061	0.020	0.019
9	KUMARAPALAYAM	11/2004 to 5/2015	0.000	0.000	0.000	0.000	0.000	13.339	16.022	2.541	0.000	0.000	0.000	0.000
10	MAGARAL	11/1971 to 5/2015	0.000	0.172	0.106	0.572	1.762	25.494	27.300	1.804	0.766	0.486	0.000	0.010
11	MURAPPANDU	11/1977 to 5/2015	5.347	5.160	4.836	4.191	7.156	37.052	26.455	9.056	8.706	9.473	4.239	4.359
12	NAIDUPETA	12/1978 to 5/2015	0.506	0.056	0.361	0.535	8.628	52.001	38.047	7.503	3.747	0.306	0.020	0.339
13	PARAMAKUDI	11/1971 to 5/2015	0.008	0.024	0.040	0.325	1.893	10.696	4.076	0.266	0.207	1.032	0.120	0.061
14	SULURPET	10/1988 to 5/2015	0.583	0.049	0.071	0.049	5.140	14.873	8.827	2.201	0.043	0.004	0.000	0.098
15	THENI	6/1978 to 5/2015	15.957	44.214	62.823	56.658	77.201	101.512	65.104	34.536	17.893	13.422	6.610	5.489
16	VAZHAVACHANUR	6/1978 to 5/2015	0.083	0.127	0.094	0.571	5.145	9.606	7.176	1.492	1.134	1.070	0.756	0.350
17	VILLUPURAM	10/1972 to 5/2015	0.000	0.007	0.014	0.091	2.582	10.815	8.558	0.756	0.090	0.071	0.054	0.043

Source : SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

X Basin : Narmada			Unit : Millimeter											
Sl.No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	NARMADA AT DINDORI	2014-15	13.32	81.70	205.80	77.55	103.90	15.70	7.72	6.53	6.23	6.94	5.21	2.22
2	NARMADA AT MANOT		6.95	122.40	338.40	147.80	86.82	39.69	20.46	15.08	11.66	12.48	7.75	3.76
3	BURHNER AT MOHGAON		10.41	168.70	278.40	190.50	104.90	22.27	13.10	8.30	6.30	10.44	3.65	1.03
4	BANJAR AT BAMNI		2.27	68.81	112.30	67.87	36.44	23.70	12.51	3.52	1.67	1.37	0.49	0.00
5	HIRAN AT PATAN		2.48	34.16	170.50	69.38	35.93	10.70	7.01	9.39	6.62	6.15	3.18	0.83
6	SHER AT BELKHEDI		1.90	46.70	68.33	74.03	7.06	1.61	0.84	1.00	0.73	0.79	0.78	0.44
7	NARMADA AT BARMANGHAT		96.95	243.70	896.80	770.00	235.20	176.50	156.60	142.20	165.20	185.30	153.20	146.60
8	SHAKKAR AT GADARWADA		0.71	57.25	144.30	166.10	18.59	4.82	2.58	2.40	1.95	2.01	2.22	0.96
9	NARMADA AT SANDIA		114.20	354.10	996.80	960.80	316.80	213.10	178.40	156.90	174.30	198.10	169.30	151.20
10	NARMADA AT HOSHANGABAD		116.80	522.20	1237.00	1187.00	298.30	214.50	195.70	183.60	195.30	216.10	191.80	179.40
11	GANJAL AT CHHIDGAON		1.14	115.30	54.36	98.89	13.53	6.72	4.39	5.49	5.02	5.44	4.57	1.18
12	NARMADA AT HANDIA		130.50	832.70	1128.90	1437.00	361.30	268.60	248.20	251.00	242.30	288.50	239.40	192.70
13	KUNDI AT KOGAON		0.00	160.70	94.60	286.70	16.15	5.06	1.09	0.31	6.23	0.49	0.00	0.00
14	NARMADA AT MANDLESHWAR		404.60	557.40	981.20	2181.00	508.90	619.50	524.60	811.20	742.80	799.50	703.10	748.10
15	URI AT DHULSAR		0.00	2.46	7.57	57.34	1.56	0.06	0.07	0.00	0.00	0.00	0.00	0.00
16	GOI AT PATI		0.00	21.81	33.89	62.05	9.44	4.12	0.77	0.00	0.00	0.00	0.00	0.00
17	NARMADA AT GARUDESRAWAR		48.03	128.90	364.60	2002.00	254.20	41.34	66.13	338.90	84.12	24.47	26.71	84.09
18	ORSANG AT CHANDWADA		0.00	47.42	39.24	172.70	9.94	2.05	0.88	0.89	0.76	0.54	0.00	0.00
19	NARMADA AT BIJORA		111.10	63.73	422.70	450.80	171.20	147.90	133.60	116.10	138.60	173.20	191.10	190.30

Source : SE(C),Govt. of India, CWC, Office of the Chief Eng., (Narmada Basin) Oraganistion, Bhopal (MP).

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

XI Basin : Tapi			Unit : Millimeter											
Sl.No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	GIDHADE	2014-2015	429.58	4704.86	7972.57	4276.40	1004.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	GOPALKHEDA		257.75	873.18	1827.78	956.71	486.15	34.50	6.72	41.33	6.36	14.98	0.67	0.00
3	YERLI		488.55	1349.86	3090.25	1550.33	735.04	63.53	4.51	42.21	0.00	3.75	0.82	0.00
4	SARANGKHEDA		529.36	5575.29	8778.39	3074.93	1504.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	BURHANPUR		471.11	4914.64	8284.23	3390.01	885.83	197.24	44.84	16.93	18.68	11.82	3.58	0.00
6	DEDTALAI		128.44	1960.98	2418.74	1217.59	141.52	67.91	19.83	0.00	0.00	0.00	0.00	0.00
7	GADAT		0.00	1033.00	1173.00	1349.00	211.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	DURVESH		334.00	3045.00	2129.00	1809.00	457.00	36.00	0.00	0.00	0.00	0.00	0.00	0.00
9	MOTINAROLI		137.71	536.47	532.34	599.94	234.72	95.84	40.15	5.79	33.32	18.36	31.41	20.01
10	NANIPALSAN		49.71	878.36	879.57	764.04	294.90	49.56	4.98	0.00	0.00	0.00	0.00	0.00
11	OZERKHEDA		120.86	999.67	604.45	541.15	214.83	98.41	68.76	29.08	23.01	22.69	19.57	18.80
12	PINGALWADA		32.26	292.23	282.09	575.62	126.77	63.53	52.78	53.55	44.64	43.38	32.87	18.19
13	MAHUWA		7.96	725.45	712.20	739.18	94.99	14.27	9.08	5.46	3.71	3.58	3.13	3.01

Source : EE, Tapi Division, CWC.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

XII Basin : West Flowing Rivers from Tapi to Tadri											Unit : Millimeter			
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	SANTEGULI	6/1988 to 5/2015	351.43	1502.73	1140.65	441.85	202.14	81.40	36.13	20.03	11.45	7.87	5.65	8.04

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari											Unit : Millimeter			
Sl. No.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ADDOOR	7/2003 to 5/2015	408.08	1080.49	962.40	548.13	281.77	118.24	6.96	0.00	0.90	0.00	0.00	6.95
2	AMBARAMPALAYAM	6/1978 to 5/2015	16.76	18.16	26.21	38.57	35.91	70.42	45.29	41.35	28.84	17.02	7.39	11.73
3	ARANGALY	4/1978 to 5/2015	185.66	374.90	321.15	182.93	137.87	95.17	26.71	14.74	9.24	8.84	10.35	20.42
4	ASHRAMAM	9/1999 to 5/2015	11.82	27.93	16.62	43.88	90.51	120.14	31.32	8.57	14.77	12.96	12.59	11.03
5	AVERSHE	6/2002 to 5/2015	443.86	1564.14	1504.46	748.59	322.76	130.05	44.02	17.93	4.75	2.71	0.80	6.10
6	AYILAM	12/1978 to 5/2015	165.71	167.11	125.98	143.81	231.16	176.45	61.17	16.59	7.63	8.69	20.03	44.89
7	BANTWAL	11/1970 to 5/2015	372.82	1127.05	1094.12	493.34	295.37	130.35	37.39	13.19	5.12	3.02	2.37	8.75
8	ERINJIPUZHA	6/1985 to 5/2015	216.42	707.68	703.39	323.73	214.54	116.59	45.31	18.85	6.08	2.31	1.47	11.46
9	HALADI	12/1985 to 5/2015	307.20	910.72	827.52	371.83	206.40	128.11	88.58	91.54	95.69	119.09	107.95	97.80
10	KALAMPUR	6/1986 to 5/2015	421.39	756.53	601.47	377.38	346.58	191.90	44.33	9.46	1.53	0.49	3.46	41.95
11	KALLOOPARA	6/1985 to 5/2015	415.88	542.49	389.52	283.10	328.46	217.18	36.77	7.77	3.86	2.19	25.48	101.18
12	KARATHODU	6/1986 to 5/2015	217.09	518.38	334.74	214.03	213.42	142.75	32.07	8.10	2.98	3.41	3.23	9.76
13	KIDANGOOR	7/1985 to 5/2015	503.25	629.07	458.56	313.09	379.35	239.04	42.07	7.69	2.03	3.94	32.34	126.46
14	KUMBIDI	5/1979 to 5/2015	100.60	224.54	167.53	97.77	85.14	57.28	17.70	8.63	3.25	1.62	2.47	6.62
15	KUNIYIL	1/1979 to 5/2015	325.50	661.74	508.67	288.38	220.97	132.96	39.39	18.39	6.40	4.58	3.50	20.23
16	KUTTYADY	3/2000 to 5/2015	766.16	1359.53	1067.81	689.21	426.74	206.15	131.47	61.45	39.98	26.54	24.05	108.28
17	KUZHITHURAI	11/2000 to 5/2015	1.98	6.37	3.25	7.42	34.30	34.98	19.80	2.94	1.11	0.53	1.09	1.04
18	MALAKKARA	6/1985 to 5/2015	324.32	469.38	372.36	283.23	301.93	204.74	64.72	33.21	14.95	15.56	30.07	79.56
19	MANKARA	6/1985 to 5/2015	23.38	60.89	43.73	32.65	30.38	31.72	10.64	4.93	2.48	1.32	1.41	2.34
20	NEELESWARAM	6/1971 to 5/2015	227.24	399.59	362.98	208.82	178.13	118.69	48.04	23.95	19.87	23.21	30.44	52.47
21	PATTAZHY	4/1978 to 5/2015	130.08	177.62	155.59	137.53	184.33	171.43	68.21	36.45	23.38	27.46	28.49	42.73
22	PERUMANNU	6/1985 to 5/2015	424.57	1146.49	943.67	452.78	259.39	110.98	31.62	15.92	7.87	8.15	5.19	26.51
23	PUDUR	9/1985 to 5/2015	17.77	45.06	32.76	22.23	24.26	33.35	13.55	6.08	3.42	2.71	2.55	3.28
24	PULAMANTHOLE	2/1986 to 5/2015	227.14	491.69	367.45	260.37	252.09	147.21	38.14	13.61	6.06	6.42	11.49	25.95
25	RAMAMANGALAM	4/1978 to 5/2015	549.99	785.19	638.86	432.69	436.67	310.41	170.12	145.44	135.07	148.60	150.72	204.28
26	THUMPAMON	12/1977 to 5/2015	208.40	279.10	216.40	169.16	228.00	184.05	36.23	9.88	3.94	3.60	13.95	43.24
27	VANDIPERIYAR	6/2000 to 5/2015	32.53	58.70	52.27	31.48	27.95	26.42	6.24	1.65	0.49	0.19	0.31	3.02
28	YENNEHOLE	7/1989 to 5/2015	600.04	1596.75	1319.32	557.73	316.31	128.86	41.86	12.32	2.87	2.89	1.30	11.52

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

XIV Basin : Mahi														Unit: Millimeter
Sl.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	ANAS AT CHAKALIYA	1/2014 to 12/2015	1.77	60.92	106.62	94.63	50.74	16.61	6.47	3.26	3.29	2.11	1.11	0.00
2	JAKHAM AT DHARIAWAD	1/2014 to 12/2015	0.83	28.71	142.20	34.99	61.92	5.78	2.96	4.86	3.39	3.11	0.27	0.00
3	MAHI AT KHANPUR	1/2014 to 12/2015	1.30	29.54	59.16	37.72	26.85	3.05	2.45	2.11	1.71	2.89	1.31	0.94
4	MAHI AT MATAJI	1/2014 to 12/2015	0.00	114.22	157.50	140.19	103.34	16.60	1.01	2.35	1.81	1.93	0.20	0.98
5	MAHI AT PADERDIBADI	1/2014 to 12/2015	0.26	13.39	53.86	33.50	20.12	4.31	1.85	2.42	1.62	1.83	0.84	0.29
6	SOM AT RANGELI	1/2014 to 12/2015	0.74	10.08	51.25	49.86	34.34	4.45	2.43	3.18	2.71	2.69	0.92	0.33

Source: SE, Mahi Division, CWC, Gandhi Nagar.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

XV Basin : Sabarmati														Unit: Millimeter
Sl.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	SABARMATI AT DEROL BRIDGE	1/2014 to 11/2015	0.00	1.21	2.49	2.95	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	SABARMATI AT KHEROJ	1/2014 to 10/2015	0.11	7.29	7.40	21.40	6.12	1.03	0.09	0.00	0.00	0.00	0.00	0.00
3	SABARMATI AT VOUTH A	1/2014 to 12/2015	4.48	15.22	32.23	26.25	30.29	5.66	5.02	6.11	4.58	3.58	3.04	3.12
4	WAKAL AT KOTRA(JOTASAN)	1/2014 to 11/2015	0.28	11.50	20.54	59.83	21.69	5.59	2.45	1.32	1.01	0.96	0.96	0.18
5	WATRAK AT GADVEL (RATANPUR)	1/2014 to 12/2015	1.67	10.41	10.30	20.73	15.92	1.85	1.00	0.25	0.00	0.00	0.00	0.00
6	WATRAK AT KHEDA	1/2014 to 11/2015	0.42	6.26	6.77	11.48	6.50	0.15	0.00	0.00	0.00	0.00	0.00	0.00

Source: SE, Mahi Division, CWC, Gandhi Nagar.

Table 8 : Monthly average flow per unit drainage area by site and river basin during 2014-15

XVI Basin : WFR of Kutch, Saurashtra Including Luni														Unit: Millimeter
Sl.	Site Name	Reference Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	BALARAM AT CHITRASANI	1/2014 to 12/2015	5.09	2.31	7.52	21.29	19.46	0.57	0.00	0.00	0.00	0.00	0.00	0.00
2	BANAS AT ABU ROAD	1/2014 to 12/2015	0.00	0.37	5.29	9.49	6.33	0.39	0.00	0.00	0.00	0.00	0.00	0.00
3	BANAS AT KAMALPUR	5/2014 to 11/2015	0.44	2.30	2.08	6.66	2.11	0.87	0.00	0.00	0.00	0.00	0.00	0.20
4	BANAS AT SAROTRY	1/2014 to 12/2015	0.00	2.89	9.53	14.35	10.93	1.39	0.01	0.00	0.00	0.00	0.00	0.00
5	BHADAR AT GANOD	1/2014 to 12/2015	0.00	0.00	1.66	25.16	59.21	0.87	0.00	0.00	0.00	0.00	0.00	0.00
6	LUNI AT BALOTRA	6/2014 to 11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	LUNI AT GANDHAV	1/2014 to 11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	MACHHU AT GUNGAN	1/2014 to 12/2015	0.00	0.04	1.24	15.08	14.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00
9	RUPEN AT SAPAWADA	1/2014 to 12/2015	0.63	12.07	5.61	0.83	0.00	0.00	0.00	0.10	0.00	0.09	0.00	0.00
10	SHETRANJI AT LOWARA	1/2014 to 11/2015	6.09	8.19	24.09	23.94	7.19	0.31	0.11	0.00	0.00	0.00	0.00	0.00
11	MACHHUNDRI AT UNA	7/2014 to 12/2015	0.00	0.00	7.38	55.15	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: SE, Mahi Division, CWC, Gandhi Nagar.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

I Basin: Mahanadi											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Baronda			Rajim			Seorinarayan			Basantpur		
1	2005-2006	0.332	0.000	0.332	0.569	0.000	0.569	Data Not Available			4.084	0.003	4.087
2	2006-2007	0.431	0.000	0.431	1.569	0.000	1.569				4.446	0.005	4.451
3	2007-2008	1.214	0.000	1.214	1.317	0.000	1.317				6.651	0.002	6.653
4	2008-2009	0.454	0.000	0.454	0.659	0.000	0.659				2.093	0.001	2.094
5	2009-2010	0.130	0.000	0.130	0.270	0.000	0.270				4.165	0.001	4.166
6	2010-2011	0.665	0.000	0.665	0.855	0.000	0.855				4.096	0.002	4.098
7	2011-2012	0.008	0.000	0.008	0.002	0.000	0.002				4.394	0.015	4.409
8	2012-2013	0.060	0.000	0.060	0.120	0.000	0.120				3.719	0.007	3.726
9	2013-2014	0.206	0.000	0.206	0.307	0.000	0.307	6.165	0.000	6.165	4.830	0.008	4.838
10	2014-2015	0.089	0.000	0.089	0.307	0.000	0.307	15.491	0.000	15.491	7.246	0.002	7.248
	Site Name	Simga			Andhiarkhore			Ghatora			Jondhra		
1	2005-2006	1.388	0.000	1.388	0.383	0.000	0.383	0.119	0.000	0.119	3.094	0.003	3.097
2	2006-2007	1.335	0.000	1.335	0.528	0.000	0.528	0.164	0.000	0.164	5.875	0.000	5.875
3	2007-2008	1.523	0.000	1.523	0.088	0.000	0.088	0.039	0.000	0.039	4.144	0.000	4.144
4	2008-2009	0.077	0.000	0.077	0.131	0.000	0.131	0.062	0.000	0.062	4.596	0.000	4.596
5	2009-2010	0.333	0.000	0.333	0.024	0.000	0.024	0.048	0.000	0.048	2.940	0.002	2.942
6	2010-2011	0.536	0.000	0.536	0.021	0.000	0.021	0.041	0.000	0.041	1.733	0.000	1.733
7	2011-2012	0.003	0.000	0.003	0.772	0.000	0.772	1.129	0.000	1.129	4.726	0.000	4.726
8	2012-2013	0.992	0.000	0.992	0.148	0.000	0.148	0.393	0.000	0.393	4.353	0.000	4.353
9	2013-2014	1.783	0.000	1.783	0.169	0.000	0.169	0.165	0.000	0.166	4.538	0.000	4.538
10	2014-2015	1.587	0.000	1.587	0.218	0.000	0.218	0.274	0.000	0.274	10.842	0.000	10.842

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Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

I Basin: Mahanadi													Unit: Million Metric Tonnes
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Site Name		Rampur			Manendragarh			Bamnidhi			Kurubhata		
1	2005-2006	0.287	0.000	0.287	0.029	0.000	0.029	0.270	0.006	0.276	1.479	0.000	1.479
2	2006-2007	0.338	0.000	0.338	0.022	0.000	0.022	0.205	0.004	0.209	1.234	0.000	1.234
3	2007-2008	0.750	0.000	0.750	0.014	0.000	0.014	0.164	0.004	0.168	1.142	0.000	1.142
4	2008-2009	0.844	0.000	0.844	0.040	0.000	0.040	0.094	0.001	0.095	1.326	0.000	1.326
5	2009-2010	5.227	0.000	5.227	0.026	0.000	0.026	0.100	0.001	0.101	0.197	0.000	0.197
6	2010-2011	0.211	0.000	0.211	0.064	0.000	0.064	0.153	0.000	0.153	0.000	0.198	0.198
7	2011-2012	0.030	0.000	0.030	0.029	0.000	0.029	0.943	0.000	0.943	3.254	0.000	3.254
8	2012-2013	0.043	0.000	0.043	0.018	0.000	0.018	0.320	0.001	0.321	0.464	0.000	0.464
9	2013-2014	0.108	0.000	0.108	0.010	0.000	0.010	0.114	0.001	0.116	0.854	0.002	0.856
10	2014-2015	0.119	0.000	0.119	0.005	0.000	0.005	0.187	0.001	0.188	1.782	0.000	1.782
Site Name		Sundargarh			Salebhata			Kesinga			Kantamal		
1	2005-2006	0.760	0.000	0.760	0.987	0.000	0.987	N.A.	N.A.	N.A.	5.516	0.059	5.575
2	2006-2007	1.112	0.000	1.112	0.853	0.000	0.853	N.A.	N.A.	N.A.	14.586	0.005	14.591
3	2007-2008	1.861	0.000	1.861	0.210	0.000	0.210	9.150	0.062	9.212	6.186	0.021	6.207
4	2008-2009	2.397	0.000	2.397	0.747	0.000	0.747	3.435	0.004	3.439	9.084	0.000	9.084
5	2009-2010	2.983	0.000	2.983	0.066	0.000	0.066	14.770	0.000	14.770	0.000	0.000	0.000
6	2010-2011	0.000	1.078	1.078	1.031	0.000	1.031	1.741	0.018	1.759	1.616	0.007	1.623
7	2011-2012	3.248	0.001	3.249	0.275	0.000	0.275	0.814	0.002	0.816	5.578	0.000	5.578
8	2012-2013	1.370	0.000	1.370	0.366	0.000	0.366	1.089	0.013	1.102	9.594	0.016	9.610
9	2013-2014	0.893	0.003	0.896	0.130	0.000	0.130	1.786	0.079	1.865	22.634	0.007	22.642
10	2014-2015	1.450	0.000	1.450	0.399	0.000	0.399	18.344	0.008	18.352	9.013	0.022	9.035
Site Name		Tikarapara											
1	2005-2006	11.570	0.097	11.667									
2	2006-2007	15.983	0.128	16.111									
3	2007-2008	9.500	0.240	9.741									
4	2008-2009	8.364	0.364	8.728									
5	2009-2010	0.023	0.021	0.044									
6	2010-2011	5.711	0.060	5.772									
7	2011-2012	5.818	0.052	5.870									
8	2012-2013	7.469	0.013	7.482									
9	2013-2014	7.526	0.049	7.576									
10	2014-2015	8.757	0.022	8.779									

Source: Suspended Sediment Year Book (2005 to 2015) Mahandi Basin.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

II Basin : Subernarekha & Burhabalang											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Baitarani at Champua			Baitarani at Anandpur			Kharkai at Adityapur			Subranrekha at Jamshedpur		
1	2005-2006	0.584	0.002	0.586	2.477	0.011	2.488	0.345	0.004	0.349	0.850	0.018	0.868
2	2006-2007	0.557	0.002	0.559	2.123	0.007	2.130	2.151	0.002	2.153	5.800	0.038	5.838
3	2007-2008	0.925	0.004	0.929	4.487	0.034	4.521	1.528	0.002	1.530	2.652	0.011	2.663
4	2008-2009	0.537	0.002	0.539	2.387	0.004	2.391	12.031	0.001	12.032	2.803	0.028	2.831
5	2009-2010	0.207	0.001	0.208	0.787	0.004	0.791	1.045	0.001	1.046	1.153	0.058	1.211
6	2010-2011	3.412	0.005	3.417	0.192	0.005	0.197	0.013	0.001	0.014	0.058	0.005	0.063
7	2011-2012	0.821	0.005	0.826	0.192	0.005	0.197	0.013	0.001	0.014	0.058	0.005	0.063
8	2012-2013	0.203	0.000	0.203	0.315	0.001	0.316	0.034	0.001	0.035	0.796	0.023	0.819
9	2013-2014	0.444	0.001	0.445	1.579	0.004	1.584	0.809	0.013	0.823	2.376	0.016	2.392
10	2014-2015	0.480	0.000	0.481	1.636	0.003	1.639	0.773	0.007	0.780	1.243	0.008	1.250
	Site Name	Subranrekha at Ghatsila			Burhabalang at Govindpur								
1	2005-2006	0.294	0.001	0.295	1.373	0.015	1.388						
2	2006-2007	6.156	0.091	6.247	1.937	0.007	1.944						
3	2007-2008	11.146	0.026	11.172	2.174	0.020	2.194						
4	2008-2009	0.201	0.001	0.202	1.710	0.005	1.715						
5	2009-2010	0.852	0.000	0.852	1.393	0.006	1.399						
6	2010-2011	0.048	0.017	0.065	0.426	0.000	0.426						
7	2011-2012	0.048	0.017	0.065	0.016	0.002	0.018						
8	2012-2013	0.852	0.042	0.894	0.253	0.001	0.254						
9	2013-2014	2.326	0.027	2.353	0.884	0.018	0.902						
10	2014-2015	0.531	0.005	0.537	0.393	0.008	0.402						

Source: Suspended Sediment Year Book (2005 to 2015) Subernarekha, Burhabalang & Baitarni.

III Basin: Brahmani & Baitarani											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Sankh at Tilga			Brahmani at Jenapur			Brahmani at Panposh			Brahmani at Gamlai		
1	2005-2006	1.421	0.002	1.423	4.467	0.046	4.513	4.310	0.037	4.347	2.279	0.012	2.291
2	2006-2007	1.203	0.001	1.204	4.728	0.053	4.781	8.494	0.014	8.508	7.288	0.006	7.294
3	2007-2008	1.301	0.000	1.301	7.671	0.019	7.690	15.179	0.019	15.198	13.553	0.007	13.56
4	2008-2009	1.117	0.000	1.117	<----Data not available ---->			11.015	0.019	11.034	8.105	0.007	8.112
5	2009-2010	1.469	0.000	1.469	<----Data not available ---->			4.573	0.010	4.583	3.876	0.004	3.880
6	2010-2011	0.721	0.001	0.722	0.301	0.040	0.341	2.130	0.010	2.140	1.302	0.004	1.306
7	2011-2012	0.721	0.001	0.722	2.330	0.270	2.600	18.823	0.014	18.837	10.747	0.006	10.753
8	2012-2013	1.314	0.001	1.314	1.868	0.169	2.037	7.530	0.016	7.546	2.185	0.006	2.191
9	2013-2014	0.786	0.009	0.795	2.638	0.197	2.835	9.598	0.037	9.635	2.400	0.003	2.402
10	2014-2015	0.983	0.001	0.984	2.643	0.101	2.744	7.117	0.007	7.124	0.824	0.001	0.825

Source: Suspended Sediment Year Book (2005 to 2015) Brahmani Basin.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

IV Basin: Godavari											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Godavari at Polavaram			Sabari at Konta			Godavari at Perur			Indravati at Pathagudem		
1	2005-2006	69.708	0.218	69.926	2.595	0.093	2.688	54.087	0.002	54.089	11.659	0.000	11.659
2	2006-2007	62.373	0.160	62.533	40.954	0.137	41.091	211.994	0.010	212.004	24.353	0.011	24.364
3	2007-2008	44.728	0.180	44.908	10.306	0.213	10.519	31.520	0.001	31.521	25.505	0.008	25.513
4	2008-2009	24.420	0.028	24.448	4.501	0.119	4.620	23.618	0.007	23.625	7.807	0.004	7.811
5	2009-2010	12.067	0.027	12.094	2.031	0.027	2.058	6.801	0.003	6.804	5.237	0.000	5.237
6	2010-2011	76.467	0.135	76.602	24.421	0.423	24.844	74.426	0.205	74.631	15.620	0.008	15.628
7	2011-2012	18.025	0.110	18.135	2.149	0.174	2.323	59.054	0.008	59.062	7.144	0.000	7.144
8	2012-2013	37.552	0.096	37.648	4.135	0.126	4.261	59.332	0.059	59.391	12.298	0.000	12.298
9	2013-2014	86.219	0.055	86.274	7.705	0.417	8.122	266.352	0.252	266.604	16.971	0.000	16.971
10	2014-2015	32.118	0.023	32.141	7.183	0.414	7.597	40.661	0.021	40.682	11.035	0.002	11.037
	Site Name	Indravati at Jagadapur			Pranhita at Tekra			Paddavagu at Bhatpalli			Wardha at Bamni		
1	2005-2006	1.627	0.000	1.627	27.786	0.008	27.794	1.146	0.005	1.151	14.632	0.005	14.637
2	2006-2007	5.087	0.000	5.087	50.732	0.009	50.741	0.874	0.001	0.875	18.00	0.002	18.002
3	2007-2008	2.829	0.002	2.831	45.513	0.019	45.532	0.211	0.001	0.212	2.643	0.002	2.645
4	2008-2009	1.197	0.000	1.197	15.197	0.001	15.198	0.129	0.004	0.129	0.498	0.001	0.499
5	2009-2010	0.930	0.000	0.930	6.723	0.006	6.729	0.024	0.000	0.024	0.078	0.002	0.080
6	2010-2011	1.425	0.000	1.425	20.410	0.045	20.455	0.287	0.010	0.297	7.885	0.074	7.959
7	2011-2012	0.605	0.000	0.605	31.397	0.002	31.399	0.060	0.066	0.126	3.473	0.034	3.507
8	2012-2013	1.703	0.000	1.703	34.260	0.007	34.267	0.116	0.012	0.128	4.583	0.068	4.651
9	2013-2014	2.903	0.000	2.903	76.578	0.031	76.609	0.298	0.009	0.307	13.398	0.054	13.453
10	2014-2015	1.696	0.000	1.696	6.599	0.007	6.606	0.079	0.003	0.082	2.575	0.009	2.584

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Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

IV Basin: Godavari											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Penganga at PG Bridge			Wardha at Nandgaon			Wardha at Hivra			Wainganga at Ashti		
1	2005-2006	11.201	0.001	11.202	0.113	0.001	0.114	1.039	0.000	1.039	15.226	0.007	15.233
2	2006-2007	11.495	0.002	11.497	0.023	0.002	0.025	1.475	0.000	1.475	13.687	0.011	13.698
3	2007-2008	0.988	0.001	0.989	0.056	0.000	0.056	2.002	0.000	2.002	18.077	0.009	18.086
4	2008-2009	0.752	0.000	0.752	0.031	0.000	0.031	0.003	0.000	0.003	3.864	0.001	3.865
5	2009-2010	0.650	0.000	0.650	0.007	0.000	0.007	0.001	0.000	0.001	5.247	0.010	5.257
6	2010-2011	11.127	0.001	11.128	0.922	0.012	0.934	0.088	0.000	0.088	3.372	0.016	3.388
7	2011-2012	2.893	0.001	2.894	0.491	0.003	0.494	1.452	0.000	1.452	5.346	0.010	5.356
8	2012-2013	3.290	0.002	3.292	0.090	0.001	0.091	0.435	0.001	0.436	8.994	0.010	9.004
9	2013-2014	5.969	0.005	5.974	0.334	0.001	0.335	0.555	0.000	0.555	18.203	0.020	18.223
10	2014-2015	0.931	0.000	0.931	0.067	0.001	0.068	0.221	0.000	0.221	3.414	0.016	3.430
	Site Name	Kanhan at Satrapur			Bagh at Rajegaon			Wainganga at Kumhari			Godavari at Mancheria		
1	2005-2006	2.978	0.013	2.991	4.688	0.000	4.688	1.595	0.000	1.595	2.551	0.005	2.556
2	2006-2007	2.217	0.004	2.221	0.000	0.000	0.000	0.000	0.000	0.000	2.560	0.006	2.566
3	2007-2008	1.995	0.008	2.003	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.004	0.043
4	2008-2009	0.014	0.002	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.275	0.002	0.277
5	2009-2010	2.081	0.006	2.087	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.022
6	2010-2011	1.526	0.003	1.529	0.000	0.000	0.000	0.000	0.000	0.000	1.584	0.005	1.589
7	2011-2012	1.389	0.021	1.410	0.000	0.000	0.000	0.000	0.000	0.000	0.301	0.001	0.302
8	2012-2013	5.918	0.001	5.919	0.000	0.000	0.000	0.000	0.000	0.000	0.213	0.002	0.215
9	2013-2014	10.210	0.019	10.229	0.000	0.000	0.000	0.000	0.000	0.000	0.969	0.006	0.975
10	2014-2015	0.645	0.001	0.646	0.162	0.000	0.163	0.064	0.004	0.067	0.090	0.001	0.091
	Site Name	Manijira at Saigaon			Godavari at Dhalegaon								
1	2005-2006	0.739	0.000	0.739	1.963	0.000	1.963						
2	2006-2007	0.224	0.000	0.224	3.705	0.000	3.705						
3	2007-2008	0.303	0.000	0.303	0.302	0.000	0.302						
4	2008-2009	0.707	0.000	0.707	0.127	0.000	0.127						
5	2009-2010	0.001	0.000	0.001	0.069	0.000	0.069						
6	2010-2011	1.399	0.005	1.404	0.400	0.000	0.400						
7	2011-2012	0.219	0.000	0.219	0.034	0.000	0.034						
8	2012-2013	0.859	0.000	0.859	0.000	0.000	0.000						
9	2013-2014	0.049	0.000	0.049	0.000	0.000	0.000						
10	2014-2015	0.003	0.000	0.003	0.000	0.000	0.000						

Source: Suspended Sediment Year Book (2005 to 2015) Godavari Basin.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

V Basin: Krishna								Unit: Million Metric Tonnes					
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Vijayawada			Keesara			Wadenapalli			Bawapuram		
1	2005-2006	2.481	0.004	2.485	0.802	0.013	0.815	1.645	0.007	1.652	4.072	0.007	4.079
2	2006-2007	Sediment Observaton suspended on 31-05-2016 and restarted wef 01-03-2014.			Sediment Observaton suspended on 31-05-2016 and restarted wef 01-03-2014.			0.800	0.009	0.809	0.524	0.001	0.525
3	2007-2008							1.200	0.032	1.232	0.962	0.025	0.987
4	2008-2009							0.641	0.123	0.764	0.081	0.007	0.088
5	2009-2010							2.544	0.62	3.164	1.380	0.004	1.384
6	2010-2011							0.511	0.012	0.523	0.012	0.000	0.012
7	2011-2012							0.836	0.039	0.875	0.014	0.000	0.014
8	2012-2013							0.031	0.019	0.050	0.139	0.000	0.139
9	2013-2014	0.000	0.000	0.000	0.000	0.002	0.002	0.550	0.054	0.605	1.392	0.000	1.392
10	2014-2015	0.057	0.000	0.057	0.066	0.010	0.076	0.022	0.004	0.026	0.731	0.001	0.732
	Site Name	Mantralayam			Marol			Haralahalli			Byladahalli		
1	2005-2006	4.936	0.013	4.950	0.974	0.000	0.974	0.719	0.004	0.723	4.200	0.200	4.400
2	2006-2007	Sediment Observaton suspended on 31-05-2016 and restarted wef 01-06-2013.			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	2007-2008				0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	2008-2009				0.463	0.000	0.463	2.259	0.015	2.274	1.200	0.100	1.300
5	2009-2010				0.725	0.000	0.725	1.447	0.007	1.454	1.100	0.000	1.100
6	2010-2011				0.417	0.007	0.424	0.721	0.018	0.739	0.015	0.001	0.016
7	2011-2012				0.417	0.004	0.421	0.555	0.014	0.569	0.004	0.001	0.005
8	2012-2013				0.131	0.000	0.131	0.181	0.001	0.182	0.004	0.000	0.004
9	2013-2014	0.046	0.006	0.052	0.304	0.000	0.304	0.762	0.009	0.770	0.007	0.000	0.007
10	2014-2015	1.064	0.040	1.104	0.173	0.000	0.173	1.572	0.002	1.575	0.007	0.000	0.007

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Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

V Basin: Krishna												Unit: Million Metric Tonnes	
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Honali			Shimoga			Yadgir			Malkhed		
1	2005-2006	0.915	0.004	0.919	1.109	0.004	1.113	17.936	0.001	17.937	0.909	0.001	0.910
2	2006-2007	0.000	0.000	0.000	0.000	0.001	0.001	7.426	0.000	7.426	0.003	0.000	0.003
3	2007-2008	0.000	0.000	0.000	0.000	0.000	0.000	1.964	0.002	1.966	0.039	0.011	0.050
4	2008-2009	0.786	0.011	0.797	0.555	0.000	0.555	0.745	0.000	0.745	0.098	0.001	0.099
5	2009-2010	0.534	0.060	0.594	1.223	0.000	1.223	13.191	0.004	13.195	0.442	0.003	0.445
6	2010-2011	0.266	0.003	0.269	0.181	0.001	0.182	1.651	0.010	1.661	0.535	0.005	0.540
7	2011-2012	0.387	0.008	0.395	0.161	0.001	0.162	1.103	0.004	1.107	0.105	0.002	0.107
8	2012-2013	0.192	0.001	0.193	0.353	0.001	0.000	0.126	0.004	0.130	0.071	0.001	0.072
9	2013-2014	0.258	0.002	0.260	0.524	0.000	0.524	1.132	0.006	1.137	0.117	0.008	0.125
10	2014-2015	0.253	0.003	0.256	1.755	0.001	1.756	0.263	0.000	0.263	0.098	0.002	0.101
	Site Name	Sarati			Huvihedigi			Takali			Cholachagudda		
1	2005-2006	0.221	0.000	0.221	5.407	0.024	5.431	0.744	0.000	0.744	2.917	0.054	2.971
2	2006-2007	0.000	0.000	0.000	0.000	0.000	0.000	0.194	0.000	0.194	2.539	0.000	2.539
3	2007-2008	0.000	0.000	0.000	0.000	0.000	0.000	0.206	0.000	0.206	8.460	0.000	8.460
4	2008-2009	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.000	0.060	0.608	0.000	0.608
5	2009-2010	0.000	0.000	0.000	0.000	0.000	0.000	0.462	0.000	0.462	0.549	0.000	0.549
6	2010-2011	0.000	0.000	0.000	0.000	0.000	0.000	0.108	0.000	0.108	0.939	0.000	0.939
7	2011-2012	0.000	0.000	0.000	0.000	0.000	0.000	0.331	0.000	0.331	0.178	0.000	0.178
8	2012-2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.076	0.000	0.076
9	2013-2014	0.032	0.000	0.032	1.744	0.013	1.757	0.248	0.000	0.248	0.613	0.000	0.613
10	2014-2015	0.009	0.000	0.009	1.193	0.021	1.214	0.067	0.000	0.067	0.052	0.000	0.052
	Site Name	Kurundwad			Karad			Warunji					
1	2005-2006	10.051	0.000	10.051	2.240	0.010	2.250	1.457	0.002	1.459			
2	2006-2007	13.996	0.000	13.996	3.358	0.012	3.370	0.000	0.000	0.000			
3	2007-2008	3.295	0.000	3.295	0.745	0.010	0.755	0.000	0.000	0.000			
4	2008-2009	2.613	0.000	2.613	0.263	0.010	0.273	0.000	0.000	0.000			
5	2009-2010	2.014	0.000	2.014	0.105	0.004	0.109	0.000	0.000	0.000			
6	2010-2011	1.711	0.000	1.711	0.358	0.000	0.358	0.000	0.000	0.000			
7	2011-2012	1.987	0.000	1.987	0.731	0.000	0.731	0.000	0.000	0.000			
8	2012-2013	0.865	0.000	0.865	0.210	0.000	0.210	0.000	0.000	0.000			
9	2013-2014	2.907	0.000	2.907	0.556	0.000	0.556	0.333	0.000	0.333			
10	2014-2015	1.309	0.000	1.309	0.259	0.000	0.259	0.122	0.000	0.122			

Source: Suspended Sediment Year Book (2005 to 2015) Krishna Basin.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

VI Basin : Cauvery											Unit: Million Metric Tonnes					
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)			
	Site Name	Thengudi			Musiri			Nallamarpatty			Elunuthimangalam					
1	2005-2006	0.005	0.001	0.006	0.559	0.111	0.670	0.031	0.026	0.057	Data Not Available					
2	2006-2007	0.002	0.000	0.002	0.292	0.034	0.326	0.001	0.000	0.001						
3	2007-2008	0.001	0.001	0.002	0.387	0.087	0.474	0.016	0.282	0.298						
4	2008-2009	0.003	0.003	0.006	0.170	0.040	0.210	0.015	0.001	0.016						
5	2009-2010	0.003	0.002	0.005	0.107	0.022	0.129	0.006	0.000	0.006						
6	2010-2011	0.002	0.001	0.003	0.132	0.048	0.180	0.000	0.000	0.000						
7	2011-2012	0.001	0.000	0.001	0.105	0.034	0.139	0.005	0.004	0.009						
8	2012-2013	0.001	0.000	0.001	0.043	0.008	0.051	0.000	0.000	0.000						
9	2013-2014	0.000	0.000	0.000	0.163	0.014	0.177	0.000	0.000	0.000				0.000	0.000	0.001
10	2014-2015	0.001	0.000	0.001	0.070	0.024	0.095	0.018	0.000	0.019				0.002	0.005	0.006
	Site Name	Kodumudi			Savandapur			Thengumarahada			Nellithurai					
1	2005-2006	0.020	0.038	0.058	0.014	0.006	0.020	0.030	0.002	0.032	0.065	0.001	0.066			
2	2006-2007	0.085	0.056	0.141	0.073	0.006	0.079	0.005	0.003	0.008	0.040	0.006	0.046			
3	2007-2008	0.032	0.054	0.086	0.020	0.005	0.024	0.020	0.005	0.025	0.050	0.000	0.050			
4	2008-2009	0.011	0.044	0.055	0.006	0.004	0.010	0.009	0.002	0.011	0.015	0.001	0.016			
5	2009-2010	0.014	0.038	0.052	0.006	0.002	0.008	0.046	0.004	0.050	0.040	0.000	0.040			
6	2010-2011	0.032	0.042	0.074	0.028	0.002	0.030	0.026	0.004	0.030	0.041	0.004	0.045			
7	2011-2012	0.019	0.059	0.078	0.007	0.002	0.009	0.015	0.005	0.020	0.040	0.008	0.048			
8	2012-2013	0.064	0.017	0.081	0.001	0.003	0.004	0.002	0.001	0.003	0.019	0.002	0.021			
9	2013-2014	0.149	0.020	0.169	0.005	0.001	0.006	0.007	0.000	0.007	0.034	0.004	0.038			
10	2014-2015	0.098	0.035	0.133	0.037	0.001	0.039	0.000	0.000	0.001	0.022	0.005	0.026			
	Site Name	Urachikottai			Kudlur			Biligundulu			T.Bekuppe					
1	2005-2006	0.324	0.015	0.339	Data Not Available			0.874	0.030	0.905	Sediment observation started from 18/09/2013					
2	2006-2007	0.034	0.003	0.037				0.129	0.016	0.145						
3	2007-2008	0.053	0.001	0.054				0.577	0.055	0.631						
4	2008-2009	0.004	0.001	0.005				0.416	0.015	0.431						
5	2009-2010	0.005	0.002	0.007				0.268	0.010	0.279						
6	2010-2011	0.004	0.002	0.006				0.080	0.024	0.104						
7	2011-2012	0.008	0.009	0.017				0.124	0.013	0.137						
8	2012-2013	0.005	0.001	0.006				0.034	0.010	0.044						
9	2013-2014	0.063	0.013	0.076	0.001	0.000	0.001	0.108	0.007	0.115	0.004	0.007	0.012			
10	2014-2015	0.045	0.021	0.065	0.006	0.001	0.006	0.056	0.009	0.065	0.007	0.003	0.011			

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Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

VI Basin : Cauvery											Unit : Millian Metric Tones					
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(9)	(10)	(11)			
	Site Name	T.K. Halli			Kollegal			T.Narsinpur			Kudige					
1	2005-2006	0.015	0.004	0.019	0.228	0.015	0.243	0.284	0.027	0.311	0.215	0.015	0.230			
2	2006-2007	Sediment Observation not done			0.145	0.011	0.156	Sediment Observation not done			Sediment Observation not done					
3	2007-2008	Sediment Observation not done			0.280	0.017	0.297	Sediment Observation not done			Sediment Observation not done					
4	2008-2009	0.009	0.002	0.011	0.093	0.10	0.193	0.016	0.006	0.022	0.004	0.002	0.006			
5	2009-2010	0.027	0.004	0.031	0.057	0.008	0.065	0.168	0.004	0.172	0.199	0.004	0.203			
6	2010-2011	0.022	0.003	0.025	0.032	0.007	0.039	0.033	0.008	0.041	0.056	0.002	0.058			
7	2011-2012	0.016	0.003	0.019	0.046	0.004	0.050	0.259	0.004	0.263	0.062	0.001	0.063			
8	2012-2013	0.003	0.001	0.004	0.012	0.002	0.014	0.042	0.002	0.044	0.053	0.001	0.054			
9	2013-2014	0.008	0.001	0.009	0.119	0.001	0.120	0.013	0.001	0.014	0.046	0.001	0.047			
10	2014-2015	0.006	0.001	0.007	0.062	0.003	0.064	0.095	0.001	0.097	0.049	0.001	0.049			
	Site Name	Muthankera			Akkihebbal			M.H.Halli			Sakleshpur					
1	2005-2006	0.253	0.34	0.593	Observation started from 03/04/2014			0.014	0.002	0.016	Observation started from 30/09/2014					
2	2006-2007	Sediment Observation not done						Sediment Observation not done								
3	2007-2008	Sediment Observation not done						Sediment Observation not done								
4	2008-2009	0.181	0.003	0.184				0.002	0.002	0.004						
5	2009-2010	0.161	0.010	0.171				0.011	0.003	0.014						
6	2010-2011	0.105	0.008	0.113				0.005	0.003	0.008						
7	2011-2012	0.151	0.002	0.153				0.008	0.002	0.010						
8	2012-2013	0.069	0.001	0.070				0.006	0.003	0.009						
9	2013-2014	0.000	0.004	0.004	0.000	0.001	0.001	0.016	0.001	0.017	0.003	0.001	0.003			
10	2014-2015	0.169	0.007	0.175	0.050	0.003	0.053	0.009	0.002	0.011	0.088	0.001	0.089			

Source: Suspended Sediment and Bedmaterial Data Book (2005-2015) Cauvery Basin.

VII Basin: Pennar											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			
	Site Name	Sagileru at Nandipalli			Pennar at Chennur			Kunderu at Alladupalli					
1	2005-2006	N.A.	N.A.	N.A.	1.137	0.025	1.162	0.557	0.013	0.570			
2	2006-2007	N.A.	N.A.	N.A.	Sediment Observation not done			Sediment Observation not done					
3	2007-2008	N.A.	N.A.	N.A.	Sediment Observation not done			Sediment Observation not done					
4	2008-2009	N.A.	N.A.	N.A.	0.312	0.012	0.324	0.001	0.000	0.001			
5	2009-2010	N.A.	N.A.	N.A.	1.821	0.016	1.837	0.396	0.019	0.415			
6	2010-2011	N.A.	N.A.	N.A.	0.933	0.066	0.999	0.365	0.184	0.549			
7	2011-2012	N.A.	N.A.	N.A.		0.012	0.486	0.365	0.059	0.424			
8	2012-2013	N.A.	N.A.	N.A.	0.165	0.002	0.167	0.135	0.013	0.148			
9	2013-2014	0.000	0.000	0.000	0.825	0.024	0.849	0.491	0.042	0.533			
10	2014-2015	0.000	0.000	0.000	0.522	0.007	0.529	0.322	0.025	0.347			

Source: Sediment Year Book (2005 to 2015)East Flowing Rivers.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

VIII Basin : East Flowing Rivers Mahanadi to Pennar											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Vamsadhara at Kashinagar			Rushikulya at Purushattampur			Nagavali at Srikakulam			Gundlakamma at Marella		
1	2005-2006	2.315	0.015	2.330	5.268	0.006	5.274	3.742	0.009	3.751	Sediment Observation not done		
2	2006-2007	11.315	0.016	11.331	5.490	0.001	5.491	9.674	0.092	9.766	Sediment Observation not done		
3	2007-2008	6.433	0.051	6.484	3.380	0.001	3.381	6.430	0.033	6.463	0.033	0.023	0.056
4	2008-2009	5.956	0.003	5.959	0.729	0.000	0.729	1.429	0.036	1.465	0.043	0.016	0.059
5	2009-2010	3.386	0.012	3.398	0.946	0.000	0.946	0.675	0.006	0.681	0.054	0.166	0.220
6	2010-2011	<---Data not available --->			1.281	0.055	1.336	0.503	0.002	0.505	0.072	0.015	0.087
7	2011-2012	1.243	0.014	1.257	0.815	0.000	0.815	0.640	0.002	0.642	0.008	0.003	0.011
8	2012-2013	0.956	0.007	0.963	0.615	0.000	0.615	1.413	0.003	1.416	0.032	0.000	0.032
9	2013-2014	1.767	0.060	1.827	2.288	0.001	2.289	1.688	0.029	1.718	0.100	0.008	0.108
10	2014-2015	3.289	0.001	3.290	0.584	0.000	0.584	3.380	0.017	3.397	0.018	0.004	0.022

Source: Sediment Year Book (2005 to 2015)East Flowing Rivers.

IX Basin : East Flowing Rivers from Pennar to Kanyakumari											Unit: Million Metric Tonnes					
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)			
Site Name		Tambraparani at Murappanadu			Swarnamukhi at Naidupeta			Kalingi at Sulerpet			Ponniyar at Vazhavachanur					
1	2005-2006	0.004	0.019	0.023	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.090	0.015	0.105			
2	2006-2007	0.000	0.000	0.000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Sediment Observation not done					
3	2007-2008	0.000	0.015	0.015	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Sediment Observation not done					
4	2008-2009	0.008	0.011	0.019	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Sediment Obsn. Not done	0.000	0.000			
5	2009-2010	0.006	0.004	0.011	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.		0.000	0.001	0.001		
6	2010-2011	0.002	0.003	0.005	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.009	0.006	0.015			
7	2011-2012	0.006	0.002	0.008	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.002	0.004	0.006			
8	2012-2013	0.001	0.001	0.002	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.003	0.003	0.006			
9	2013-2014	0.002	0.002	0.005	0.001	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.001			
10	2014-2015	0.004	0.004	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001			
Site Name		Ponniar at Gummanur			Vaigai at Paramakudi			Suriliyar at Theni			Vaigai at Ambasamundram					
1	2005-2006	0.207	6.000	6.207	Sediment Observation not done			0.062	0.052	0.114	0.058	0.083	0.141			
2	2006-2007	Sediment Observation not done						0.050	0.009	0.059	0.053	0.003	0.056			
3	2007-2008	Sediment Observation not done						0.156	0.033	0.189	0.037	0.131	0.168			
4	2008-2009	0.013	0.001	0.014				0.036	0.003	0.039	0.032	0.003	0.035			
5	2009-2010	0.007	0.001	0.008				0.028	0.010	0.038	0.014	0.004	0.018			
6	2010-2011	0.004	0.003	0.007				0.033	0.013	0.046	0.010	0.016	0.026			
7	2011-2012	0.007	0.002	0.009				0.039	0.009	0.048	0.088	0.016	0.104			
8	2012-2013	0.004	0.002	0.006				0.013	0.001	0.014	0.001	0.000	0.001			
9	2013-2014	0.011	0.001	0.012	0.000	0.000	0.000	0.021	0.005	0.026	0.000	0.000	0.000			
10	2014-2015	0.014	0.004	0.018	0.001	0.000	0.001	0.042	0.016	0.059	0.003	0.001	0.003			

Source: Sediment Year Book (2005 to 2015)East Flowing Rivers.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

X Basin : Narmada											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Orsang at Chandwada			Narmada at Garudeshwar			Mohgaon			Narmada at Mandleshwar		
1	2005-2006	0.005	0.000	0.005	2.678	0.085	2.683	9.694	0.002	9.696	3.756	0.018	3.774
2	2006-2007	2.259	0.000	2.259	6.639	0.060	3.005	3.637	0.003	3.640	23.348	0.070	23.418
3	2007-2008	1.191	0.000	1.191	3.310	0.044	4.501	1.021	0.001	1.022	3.620	0.061	3.681
4	2008-2009	0.733	0.000	0.733	0.040	0.000	0.773	0.646	0.000	0.646	0.357	0.258	0.615
5	2009-2010	0.047	0.000	0.047	0.719	0.008	0.727	0.646	0.000	0.646	1.250	0.383	1.633
6	2010-2011	0.676	0.000	0.676	0.311	0.000	0.311	2.986	0.000	2.986	2.825	0.386	3.211
7	2011-2012	0.258	0.000	0.258	0.084	0.000	0.084	2.680	0.005	2.685	5.269	0.276	5.545
8	2012-2013	0.011	0.000	0.011	0.028	0.000	0.028	1.719	0.001	1.720	3.054	0.257	3.311
9	2013-2014	0.309	0.000	0.309	2.768	0.000	2.768	2.061	0.002	2.063	6.693	0.328	7.020
10	2014-2015	0.009	0.000	0.009	0.104	0.000	0.104	1.777	0.008	1.785	0.739	0.247	0.985
	Site Name	Narmada at Handia			Narmada at Hoshangabad			Narmada at Sandia			Narmada at Manot		
1	2005-2006	4.147	0.099	4.246	41.755	0.0113	46.001	26.94	0.200	72.941	10.702	0.003	10.705
2	2006-2007	45.195	0.293	45.488	21.224	0.064	21.288	17.84	0.125	17.965	2.397	0.002	2.399
3	2007-2008	8.953	0.986	9.939	3.247	48.000	51.247	0.226	0.011	0.237	1.844	0.002	1.846
4	2008-2009	5.449	0.128	5.577	6.548	0.005	6.553	1.005	0.006	1.011	1.556	0.000	1.556
5	2009-2010	20.454	0.148	20.602	14.346	0.013	14.359	47.17	0.042	47.212	0.821	0.002	0.823
6	2010-2011	8.459	0.184	8.643	2.678	0.084	2.762	4.006	0.422	4.428	0.876	0.002	0.878
7	2011-2012	20.530	0.047	20.577	11.068	0.122	11.190	37.841	0.497	38.338	2.759	0.003	2.762
8	2012-2013	25.036	0.033	25.069	32.740	0.123	32.863	15.153	0.153	0.000	1.085	0.001	1.086
9	2013-2014	57.331	0.117	57.447	338.237	0.074	338.31	15.097	0.133	0.000	1.629	0.004	1.633
10	2014-2015	3.432	0.107	3.539	13.948	0.092	14.040	3.321	0.071	0.000	0.990	0.001	0.992
	Site Name	Shakkar at Gadarwara			Narmada at Barmanghat			Banjar at Bamni					
1	2005-2006	0.746	0.000	0.746	15.179	0.08	15.259	1.640	0.000	1.640			
2	2006-2007	2.654	0.000	2.654	3.190	0.040	3.230	0.325	0.000	0.325			
3	2007-2008	0.739	0.000	0.739	10.701	0.077	10.778	0.372	0.000	0.372			
4	2008-2009	0.093	0.000	0.093	1.844	0.006	1.850	0.209	0.000	0.209			
5	2009-2010	5.462	0.000	5.462	18.821	0.079	18.900	0.137	0.000	0.137			
6	2010-2011	0.663	0.000	0.663	1.663	0.160	1.823	0.186	0.000	0.186			
7	2011-2012	0.612	0.000	0.612	3.014	0.029	3.043	0.220	0.001	0.221			
8	2012-2013	1.229	0.000	1.229	1.576	0.035	1.611	0.085	0.001	0.000			
9	2013-2014	3.563	0.000	3.563	20.336	0.077	20.413	0.209	0.001	0.000			
10	2014-2015	0.437	0.000	0.437	4.226	0.061	4.287	0.132	0.003	0.135			

Source: Sediment Data Book (2005 to 2015) Narmada Basin.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

XI Basin : Tapi		Unit: Million Metric Tonnes											
Sl.No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Tapi at Burhanpur			Tapi at Gopalkheda			Purna at Yerli			Tapi at Sarankheda		
1	2005-2006	1.056	0.001	1.057	0.987	0.000	0.987	2.110	0.003	2.113	7.495	0.000	7.495
2	2006-2007	4.001	0.001	4.002	1.449	0.000	1.449	30.361	0.000	30.361	27.657	0.000	27.657
3	2007-2008	11.278	0.001	11.279	2.300	0.006	2.306	11.279	0.000	11.279	27.782	0.000	27.782
4	2008-2009	2.348	0.001	2.349	0.230	0.000	0.230	0.668	0.000	0.668	2.779	0.000	2.779
5	2009-2010	1.269	0.011	1.280	0.508	0.000	0.508	0.558	0.001	0.559	5.015	0.000	5.015
6	2010-2011	2.947	0.000	2.947	5.757	0.000	5.757	5.777	0.000	5.777	10.276	0.000	10.276
7	2011-2012	Sediment Observation not done			2.016	0.000	2.016	1.281	0.000	1.281	5.232	0.000	5.232
8	2012-2013	1.084	0.000	1.084	9.114	0.000	9.114	3.900	0.000	3.900	32.525	0.000	32.525
9	2013-2014	14.063	0.000	14.063	7.070	0.000	7.071	7.584	0.000	7.584	21.797	0.000	21.797
10	2014-2015	8.969	0.000	8.969	4.985	0.000	4.986	4.979	0.041	5.020	9.093	0.000	9.093

Source: Sediment Data Book (2005 to 2015) Tapi & Other West Flowing Rivers .

XII Basin : West Flowing Rivers Tapi to Tadri		Unit: Million Metric Tonnes											
Sl.No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Site Name	Ulhas at Badlapur			Purna at Mahuwa			Ambika at Gadat			Vaitarna at Durvesh		
1	2005-2006	Sediment Observations from 22-12-2014			2.418	0.000	2.418	1.539	0.000	1.539	1.819	0.000	1.819
2	2006-2007				0.869	0.000	0.869	0.805	0.000	0.805	2.649	0.000	2.649
3	2007-2008				0.604	0.000	0.604	0.401	0.000	0.401	1.571	0.000	1.571
4	2008-2009				0.332	0.000	0.332	0.583	0.000	0.583	1.829	0.000	1.829
5	2009-2010				0.059	0.000	0.059	0.174	0.000	0.174	0.677	0.000	0.677
6	2010-2011				0.154	0.000	0.154	0.150	0.000	0.150	1.589	0.001	1.59
7	2011-2012				0.137	0.000	0.137	0.427	0.000	0.427	2.257	0.001	2.258
8	2012-2013				0.078	0.000	0.078	0.106	0.000	0.106	0.801	0.000	0.801
9	2013-2014				0.294	0.000	0.294	0.297	0.000	0.297	1.354	0.000	1.354
10	2014-2015	-	0.005	0.005	0.096	0.000	0.096	0.056	0.000	0.056	1.322	0.000	1.322

Source: Sediment Year Book (2005 to 2015) West Flowing Rivers.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

XIII Basin : West Flowing Rivers Tadri to Kanyakumari										Unit: Million Metric Tonnes			
Sl.No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Site Name		Nethravathi at Bantwal			Payaswani at Erinijipuzha			Valapatanam at Perumannu			Kuttiyadi at Kuttitadi		
1	2005-2006	1.646	0.025	1.671	0.181	0.009	0.190	0.358	0.030	0.388	N.A.	N.A.	N.A.
2	2006-2007	Sediment Observation not done			Sediment Observation not done			Sediment Observation not done			N.A.	N.A.	N.A.
3	2007-2008	Sediment Observation not done			Sediment Observation not done			Sediment Observation not done			N.A.	N.A.	N.A.
4	2008-2009	Sediment Observation not done			0.108	0.001	0.109	0.091	0.001	0.092	N.A.	N.A.	N.A.
5	2009-2010	Sediment Observation not done			0.147	0.002	0.149	0.241	0.002	0.243	N.A.	N.A.	N.A.
6	2010-2011	Sediment Observation not done			0.167	0.002	0.169	0.104	0.002	0.106	N.A.	N.A.	N.A.
7	2011-2012	Sediment Observation not done			0.145	0.001	0.146	0.131	0.001	0.132	N.A.	N.A.	N.A.
8	2012-2013	0.477	0.000	0.477	0.086	0.001	0.087	0.095	0.001	0.096	N.A.	N.A.	N.A.
9	2013-2014	0.824	0.001	0.825	0.140	0.002	0.142	0.251	0.001	0.252	0.016	0.000	0.016
10	2014-2015	0.728	0.001	0.729	0.269	0.001	0.270	0.181	0.002	0.183	0.142	0.000	0.143
Site Name		Chaliyar at Kuniyil			Kadalundi at Karathodu			Bharathapuzha at Kumbidi			Pulanthode at Pulamanthole		
1	2005-2006	0.315	0.042	0.357	0.061	0.004	0.065	0.302	0.033	0.335	0.119	0.010	0.129
2	2006-2007	Sediment Observation not done			Sediment Observation not done			0.309	0.005	0.314	Sediment Observation not done		
3	2007-2008	Sediment Observation not done			Sediment Observation not done			0.551	0.020	0.571	Sediment Observation not done		
4	2008-2009	0.111	Sediment Obsn. Not done	0.111	Sediment Observation not done			0.126	0.004	0.130	Sediment Observation not done		
5	2009-2010	0.256	0.001	0.257	Sediment Observation not done			0.385	0.004	0.389	0.109	0.002	0.111
6	2010-2011	0.172	0.001	0.173	0.060	0.000	0.060	0.142	0.007	0.149	0.112	0.003	0.115
7	2011-2012	0.255	0.001	0.256	0.019	0.000	0.019	0.401	0.004	0.405	0.104	0.001	0.105
8	2012-2013	0.118	0.000	0.118	0.019	0.000	0.019	0.104	0.001	0.105	0.019	0.001	0.020
9	2013-2014	0.824	0.002	0.826	0.052	0.000	0.052	0.287	0.002	0.289	0.051	0.000	0.051
10	2014-2015	0.298	0.000	0.298	0.113	0.001	0.114	0.637	0.008	0.645	0.016	0.000	0.016
Site Name		Bharathapuzha at Mankara			Bharathapuzha at Pudur			Aliyar at Ambarampalayam			Chalakudi at Arangaly		
1	2005-2006	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.005	0.003	0.008	0.066	0.002	0.068
2	2006-2007	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Sediment Observation not done			Sediment Observation not done		
3	2007-2008	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Sediment Observation not done			Sediment Observation not done		
4	2008-2009	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.002	0.001	0.003	0.035	0.001	0.036
5	2009-2010	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.009	0.002	0.011	0.097	0.001	0.098
6	2010-2011	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.005	0.003	0.008	0.056	0.002	0.058
7	2011-2012	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.008	0.003	0.011	0.059	0.000	0.059
8	2012-2013	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.002	0.002	0.004	0.014	0.000	0.014
9	2013-2014	0.012	0.002	0.014	0.001	0.000	0.001	0.003	0.002	0.005	0.086	0.000	0.086
10	2014-2015	0.064	0.093	0.157	0.009	0.001	0.010	0.006	0.004	0.010	0.015	0.000	0.015

Contd/-

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

XIII Basin : West Flowing Rivers Tadri to Kanyakumari											Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Site Name		Periyar at Neeleswaram			Muvattupuzha at Ramamangalam			Kaliyar at Kalampur			Meenachil at Kidangoor		
1	2005-2006	0.127	0.017	0.144	0.104	0.024	0.128	0.047	0.000	0.047	0.025	0.004	0.029
2	2006-2007	0.076	Sediment Obsn. Not done	0.076	Sediment Observation not done			Sediment Observation not done			0.015	0.001	0.016
3	2007-2008	0.146	Sediment Obsn. Not done	0.146	Sediment Observation not done			Sediment Observation not done			0.028	0.001	0.029
4	2008-2009	0.054	Sediment Obsn. Not done	0.054	0.077	0.007	0.084	0.019	0.000	0.019	0.012	0.001	0.013
5	2009-2010	0.120	0.002	0.122	0.080	0.008	0.088	0.023	0.000	0.023	0.012	0.001	0.013
6	2010-2011	0.056	0.003	0.059	0.103	0.013	0.116	0.027	0.000	0.027	0.015	0.001	0.016
7	2011-2012	0.049	0.005	0.054	0.078	0.013	0.091	0.006	0.008	0.006	0.015	0.001	0.016
8	2012-2013	0.003	0.001	0.004	0.069	0.002	0.071	0.003	0.000	0.003	0.008	0.000	0.008
9	2013-2014	0.288	0.002	0.290	0.125	0.012	0.137	0.010	0.000	0.010	0.019	0.001	0.020
10	2014-2015	0.142	0.005	0.147	0.102	0.011	0.113	0.007	0.000	0.008	0.018	0.002	0.020
Site Name		Manimala at Kallooppara			Pumba at Malakkara			Achankovil at Thumpamon			Kallada at Pattazhy		
1	2005-2006	0.048	0.018	0.066	0.124	0.007	0.131	0.028	0.008	0.036	0.022	0.009	0.031
2	2006-2007	0.025	0.001	0.026	Sediment Observation not done			Sediment Observation not done			0.020	0.002	0.022
3	2007-2008	0.073	0.001	0.074	Sediment Observation not done			Sediment Observation not done			Sediment Observation not done		
4	2008-2009	0.026	0.000	0.026	0.022	0.000	0.022	0.036	0.000	0.036	0.007	0.002	0.009
5	2009-2010	0.031	0.001	0.032	0.032	0.001	0.033	0.029	0.001	0.030	0.013	0.006	0.019
6	2010-2011	0.043	0.001	0.044	0.050	0.001	0.051	0.085	0.003	0.088	0.087	0.015	0.102
7	2011-2012	0.038	0.001	0.039	0.004	0.000	0.004	0.020	0.001	0.021	0.032	0.008	0.040
8	2012-2013	0.008	0.000	0.008	0.013	0.000	0.013	0.009	0.000	0.009	0.007	0.001	0.008
9	2013-2014	0.045	0.001	0.046	0.077	0.000	0.077	0.025	0.001	0.026	0.028	0.005	0.033
10	2014-2015	0.059	0.002	0.061	0.023	0.029	0.052	0.017	0.001	0.018	0.029	0.005	0.034
Site Name		Vamanapuram at Ayilam											
1	2005-2006	0.015	0.009	0.024									
2	2006-2007	0.039	0.000	0.039									
3	2007-2008	Sediment Observation not done											
4	2008-2009	0.013	0.000	0.013									
5	2009-2010	0.017	0.002	0.019									
6	2010-2011	0.009	0.004	0.013									
7	2011-2012	0.001	0.000	0.001									
8	2012-2013	0.001	0.000	0.001									
9	2013-2014	0.032	0.003	0.035									
10	2014-2015	0.034	0.003	0.036									

Source: Sediment Year Book (2005 to 2015) West Flowing Rivers.

Table 9 : Time series of Sediment load by site in River Basin during 2005-2015

XIV Basin : Mahi								Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Site Name	Mahi at Mataji			Mahi at Paderdibadi			Mahi at Khanpur		
1	2005-2006	7.378	0.000	7.378	0.214	0.000	0.214	0.498	0.005	0.503
2	2006-2007	4.262	0.000	4.262	5.760	0.000	5.760	24.257	0.000	24.257
3	2007-2008	2.046	0.000	2.046	0.157	0.000	0.157	1.876	0.005	1.881
4	2008-2009	0.046	0.000	0.046	0.013	0.000	0.013	0.069	0.002	0.071
5	2009-2010	2.311	0.000	2.311	0.006	0.000	0.006	0.002	0.000	0.002
6	2010-2011	0.082	0.000	0.082	0.003	0.000	0.003	0.111	0.000	0.111
7	2011-2012	0.231	0.000	0.231	0.046	0.000	0.046	0.905	0.000	0.905
8	2012-2013	0.202	0.000	0.202	0.142	0.000	0.142	1.088	0.000	1.088
9	2013-2014	0.111	0.000	0.111	0.072	0.000	0.000	1.073	0.000	1.073
10	2014-2015	0.035	0.000	0.035	0.005	0.000	0.000	0.239	0.000	0.239

Source: Sediment Data Book (2005 to 2015) Mahi Flowing River Basins.

XV Basin: Sabarmati Unit: Million Metric Tonnes				
SNo	Year	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)
	Site Name	Sabarmati at Derol Bridge		
1	2005-2006	0.001	0.000	0.001
2	2006-2007	0.615	0.000	0.615
3	2007-2008	0.030	0.000	0.030
4	2008-2009	0.000	0.000	0.000
5	2009-2010	0.000	0.000	0.000
6	2010-2011	0.001	0.000	0.001
7	2011-2012	0.016	0.000	0.016
8	2012-2013	0.001	0.000	0.001
9	2013-2014	0.001	0.000	0.001
10	2014-2015	0.001	0.000	0.001

Source: Sediment Data Book (2005 to 2015) Sabarmati Flowing River Basins.

XVI Basin: WFR of Kutch, Saurashtra Including Luni								Unit: Million Metric Tonnes		
SNo	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Site Name	Shetrunji at Lowara			Banas at Kamalpur			Bhadar at Ganod		
1	2005-2006	1.932	0.000	1.932	0.029	0.000	0.029	0.039	0.000	0.039
2	2006-2007	1.475	0.000	1.475	0.770	0.000	0.77	0.434	0.000	0.434
3	2007-2008	3.122	0.000	3.122	0.815	0.000	0.815	1.330	0.000	1.330
4	2008-2009	3.018	0.000	3.018	0.064	0.000	0.064	0.503	0.000	0.503
5	2009-2010	0.457	0.000	0.457	0.004	0.000	0.004	0.049	0.000	0.049
6	2010-2011	0.359	0.000	0.359	0.174	0.000	0.174	0.070	0.000	0.070
7	2011-2012	1.199	0.000	1.199	0.043	0.000	0.043	0.007	0.000	0.007
8	2012-2013	0.049	0.000	0.049	0.001	0.000	0.001	0.000	0.000	0.000
9	2013-2014	1.191	0.000	1.191	0.029	0.000	0.029	0.010	0.000	0.010
10	2014-2015	0.057	0.000	0.057	0.044	0.000	0.044	0.000	0.000	0.000

Source: Sediment Data Book (2005 to 2015) WFR of Kutch, Saurashtra Including Luni Basins.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

I	Basin : Mahanadi										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Pairi at Baronda (Mahanadi)												
01-10 days	0	0	1772	3319	44	23	8	0	0	0	0	0
11-20 days	0	0	1005	767	59	25	6	0	0	0	0	0
R - days	0	0	586	1180	1	15	3	0	0	0	0	0
Monthly	0	0	1121	1755	35	21	6	0	0	0	0	0
Mahanadi at Rajim												
01-10 days	0	0	21190	4154	98	13	13	0	0	0	0	0
11-20 days	0	0	1520	1187	219	12	2	0	0	0	0	0
R - days	0	0	168	2053	35	12	0	0	0	0	0	0
Monthly	0	0	7626	2465	117	12	5	0	0	0	0	0
Mahanadi at Seorinarayan												
01-10 days	0	0	776467	103873	1628	218	23	0	0	0	0	0
11-20 days	0	358	49114	29968	14559	80	0	0	0	0	0	0
R - days	0	499868	2159	18352	2007	43	0	0	0	0	0	0
Monthly	0	166742	275913	50731	6065	114	8	0	0	0	0	0
Mahanadi at Basantpur												
01-10 days	19	686	238087	58632	2896	600	48	7	17	10	4	4
11-20 days	25	2151	47872	19052	48593	246	12	17	7	3	8	8
R - days	137	244455	5015	27539	3089	233	24	6	6	6	7	4
Monthly	60	82431	96991	35074	18193	360	28	10	10	6	6	5
Seonath at Kotni (Mahanadi)												
01-10 days	0	0	105942	24626	0	0	0	0	0	0	0	0
11-20 days	0	0	19039	15853	0	0	0	0	0	0	0	0
R - days	0	70567	0	14872	0	0	0	0	0	0	0	0
Monthly	0	23522	41660	18450	0	0	0	0	0	0	0	0
Seonath at Simga (Mahanadi)												
01-10 days	0	1	17237	29335	4900	600	1	0	1	0	0	0
11-20 days	0	1216	5135	5429	11036	365	0	0	0	0	0	0
R - days	25	61414	2556	7410	4986	169	0	0	0	0	0	0
Monthly	8	20877	8309	14058	6974	378	0	0	0	0	0	0

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

I	Basin : Mahanadi										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Hamp at Andhiarkhore (Mahanadi)												
01-10 days	0	0	9134	956	21	65	0	0	0	0	0	0
11-20 days	0	2184	226	1610	3278	31	0	0	0	0	0	0
R - days	0	3523	18	279	120	9	0	0	0	0	0	0
Monthly	0	1902	3126	948	1140	35	0	0	0	0	0	0
Arpa at Ghatora (Mahanadi)												
01-10 days	0	108	19277	1378	30	14	1	0	0	0	0	0
11-20 days	5	235	1219	758	2922	2	0	1	0	0	0	0
R - days	38	964	145	144	29	1	2	0	0	0	0	0
Monthly	14	436	6880	760	994	6	1	0	0	0	0	0
Seonath at Jondhra (Mahanadi)												
01-10 days	0	0	276154	218461	0	0	0	0	0	0	0	0
11-20 days	0	0	16340	131209	0	0	0	0	0	0	0	0
R - days	0	318642	2607	88637	0	0	0	0	0	0	0	0
Monthly	0	106214	98367	146102	0	0	0	0	0	0	0	0
Jonk at Rampur (Mahanadi)												
01-10 days	0	0	1252	3150	74	6	0	0	0	0	0	0
11-20 days	0	182	2074	907	547	1	0	0	0	0	0	0
R - days	0	1538	440	1364	128	1	0	0	0	0	0	0
Monthly	0	573	1255	1807	250	3	0	0	0	0	0	0
Hasdeo at Manendragarh (Mahanadi)												
01-10 days	0	3	162	71	8	1	0	2	0	0	0	0
11-20 days	0	41	39	47	27	0	0	0	0	0	0	0
R - days	0	40	29	19	6	0	0	0	0	0	0	0
Monthly	0	28	77	46	14	0	0	1	0	0	0	0
Hasdeo at Bamnidhi (Mahanadi)												
01-10 days	21	48	8696	840	127	41	15	5	7	9	5	4
11-20 days	30	325	3172	410	536	18	6	7	4	4	6	10
R - days	51	2773	711	291	194	15	9	2	5	9	4	1
Monthly	34	1049	4193	514	286	25	10	5	5	7	5	5

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

I Basin : Mahanadi												Unit : Tonnes per day
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Mand at Kurubhata (Mahanadi)												
01-10 days	0	0	95507	16330	717	129	11	6	0	0	0	0
11-20 days	0	2441	34532	8645	3374	60	8	0	0	0	0	0
R - days	0	8637	1352	4467	831	50	13	0	0	0	0	0
Monthly	0	3693	43797	9814	1641	80	11	2	0	0	0	0
Ib at Sundergarh (Mahanadi)												
01-10 days	14	213	96677	30139	63	10	17	0	0	0	0	0
11-20 days	2	2837	3879	1791	113	34	4	0	0	0	0	0
R - days	42	6753	1008	613	18	20	0	0	0	0	0	0
Monthly	19	3268	33855	10848	65	21	7	0	0	0	0	0
Ong at Salebhata (Mahanadi)												
01-10 days	0	0	23808	8234	18	0	0	0	0	0	0	0
11-20 days	0	0	5998	369	48	0	0	0	0	0	0	0
R - days	0	0	397	996	3	0	0	0	0	0	0	0
Monthly	0	0	10068	3200	23	0	0	0	0	0	0	0
Tel at Kesinga (Mahanadi)												
01-10 days	1363	7458	411817	348796	6207	150	163	38	31	12	6	20
11-20 days	1075	25586	154030	162394	13330	87	46	24	19	21	61	67
R - days	887	404995	137602	92252	10925	78	78	24	25	11	65	80
Monthly	1108	146013	234483	201147	10154	105	96	29	25	15	44	56
Tel at Kantamal (Mahanadi)												
01-10 days	512	1346	86700	141654	852	122	56	102	104	29	80	194
11-20 days	512	7996	16681	19025	3137	32	18	42	56	100	216	338
R - days	1548	543345	8163	13798	614	56	25	48	43	92	293	329
Monthly	857	184229	37181	58159	1534	70	33	64	68	74	196	287
Mahanadi at Tikarapara												
01-10 days	3374	1599	329994	78539	3692	381	314	219	158	134	49	0
11-20 days	1544	10571	107566	47358	25894	121	115	298	58	64	139	144
R - days	523	175783	21039	45454	2154	185	223	0	86	115	63	0
Monthly	1814	62651	152866	57117	10580	229	217	172	101	104	84	48

Source: Suspended Sediment Data Year Book (2014 - 2015) Mahanadi Basin.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

II Basin : Subernarekha												Unit : Tonnes per day
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Subarnarekha at Jamshedpur												
01-10 days	110	1507	53068	6499	267	472	103	22	45	36	46	49
11-20 days	180	1464	24750	1605	1580	182	81	20	43	31	36	45
R - days	181	10256	5739	14111	476	194	48	20	44	45	38	32
Monthly	157	4409	27852	7405	774	283	77	21	44	37	40	42
Subarnarekha at Ghatsila												
01-10 days	117	379	26360	6134	153	108	42	37	29	25	24	33
11-20 days	141	674	9270	1114	698	65	43	31	24	27	24	29
R - days	421	3304	2393	1440	121	48	32	29	22	27	23	27
Monthly	226	1452	12674	2896	324	74	39	32	25	26	24	30
Kharkai at Adityapur (Subarnarekha)												
01-10 days	34	2979	20121	2115	563	51	49	40	44	39	15	99
11-20 days	39	2134	12331	1465	432	73	20	38	41	29	34	41
R - days	190	26167	3226	2158	189	37	54	35	44	12	48	25
Monthly	88	10427	11893	1913	395	54	41	38	43	27	32	55
Govindpur (Subernarekha)												
01-10 days	45	1439	3584	8356	177	66	45	66	0	24	104	166
11-20 days	41	1562	1444	4605	2706	24	48	62	0	20	101	41
R - days	272	9956	335	3913	81	25	19	58	0	16	55	4
Monthly	119	4319	1788	5625	988	38	37	62	0	20	87	70

Source: Suspended Sediment Data Year Book (2014 - 2015) (Subernarekha & Burhabalang)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

III Basin: Brahmani & Baitarani											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Baitarani at Anandpur												
01-10 days	71	1719	102058	3969	908	418	237	179	66	59	18	57
11-20 days	69	843	11527	3273	4287	334	233	222	61	57	20	52
R - days	99	55458	6674	3292	1263	256	142	144	71	29	19	58
Monthly	80	19340	40086	3511	2153	336	204	182	66	48	19	56
Baitarani at Champua												
01-10 days	9	67	30312	3053	187	102	19	19	16	12	15	74
11-20 days	8	495	2357	1131	2094	53	14	13	21	9	14	14
R - days	12	14954	2017	524	241	25	13	11	21	8	40	11
Monthly	10	5172	11562	1569	841	60	15	14	19	10	23	33
Brahmani at Tilga												
01-10 days	0	542	34127	20460	241	39	19	36	16	0	0	0
11-20 days	13	1908	17984	4490	229	28	8	4	0	0	0	0
R - days	419	12302	2968	912	64	22	0	0	0	0	0	0
Monthly	144	4917	18360	8621	178	30	9	13	5	0	0	0
Brahmani at Panposh												
01-10 days	102	1730	124438	182	3809	N.A.	N.A.	100	51	44	32	38
11-20 days	123	5941	170598	N.A.	N.A.	N.A.	N.A.	78	43	43	37	33
R - days	718	81419	42367	N.A.	N.A.	N.A.	N.A.	55	4	34	36	39
Monthly	314	29697	112468	182	3809	N.A.	N.A.	78	33	40	35	37
Brahmani at Gomlai												
01-10 days	6	130	5162	19220	3249	835	22	12	6	3	5	5
11-20 days	6	367	14061	12637	3458	41	16	10	4	3	4	6
R - days	161	1089	8314	10928	1577	42	13	7	4	3	3	10
Monthly	58	529	9179	14262	2761	306	17	10	5	3	4	7
Brahmani at Jenapur												
01-10 days	1696	4749	70664	41570	5078	642	825	400	296	407	263	554
11-20 days	2841	3146	29205	22996	5881	251	628	225	253	1899	390	692
R - days	888	25800	17824	23468	2464	514	556	222	197	1042	596	490
Monthly	1808	11232	39231	29345	4474	469	670	282	249	1116	416	579

Source: Suspended Sediment Data Year Book (2014 - 2015) Brahmani & Baitarani).

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

IV Basin : Godavari Unit : Tonnes per day												
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Godavari at Polavaram												
01-10 days	149	1012	160742	1911687	3782	1122	64	149	226	39	100	177
11-20 days	151	12049	71645	354628	22082	385	86	138	91	67	118	69
R - days	171	466139	57741	88796	6139	345	266	279	94	111	181	20
Monthly	157	159733	96709	785037	10668	617	139	189	137	72	133	89
Sabari at Konta (Godavari)												
01-10 days	2558	3676	44743	242765	8981	5639	2910	2449	1506	2670	1930	2273
11-20 days	2755	23134	23500	56391	66570	4438	3037	1592	2089	2811	2078	2001
R - days	2838	69233	68210	63113	11301	3546	2689	1449	1871	2887	2423	2193
Monthly	2717	32014	45484	120756	28951	4541	2879	1830	1822	2789	2144	2156
Godavari at Perur												
01-10 days	25	60	265966	2370459	5070	2702	393	160	132	62	43	20
11-20 days	23	26568	61290	336553	31765	1262	309	197	110	86	24	20
R - days	63	701046	44506	130206	7173	667	193	144	81	73	22	19
Monthly	37	242558	123921	945739	14669	1544	298	167	108	74	30	20
Indravati at Pathagudem												
01-10 days	0	234	82476	526174	4259	1474	116	0	0	0	0	0
11-20 days	0	69535	26529	47695	35564	884	45	0	0	0	0	0
R - days	14	195969	36366	45491	6513	449	0	0	0	0	0	0
Monthly	5	88579	48457	206453	15445	936	54	0	0	0	0	0
Indravati at Jagdalpur												
01-10 days	0	114	33933	26946	204	0	0	0	0	0	0	0
11-20 days	0	6981	9663	7203	6801	0	0	0	0	0	0	0
R - days	1929	47765	4627	18138	82	0	0	0	0	0	0	0
Monthly	643	18287	16074	17429	2362	0	0	0	0	0	0	0
Pranahita at Tekra												
01-10 days	3	11	48488	335547	1136	416	66	37	63	31	21	14
11-20 days	8	8179	12915	106391	797	167	58	51	67	34	17	15
R - days	12	103514	11388	18817	490	105	36	53	48	36	16	10
Monthly	8	37235	24264	153585	808	229	53	47	59	34	18	13
Peddavagu at Bhatpalli												
01-10 days	24	24	11	6870	18	12	10	18	18	40	10	10
11-20 days	21	43	22	97	19	12	8	24	12	22	8	19
R - days	12	16	593	21	14	12	7	9	11	11	8	6
Monthly	19	28	209	2329	17	12	8	17	14	24	9	12

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

IV Basin : Godavari											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Wardha at Bamni (Godavari)												
01-10 days	15	56	4222	156900	896	356	201	67	42	41	15	5
11-20 days	35	2678	1132	20718	585	306	200	25	36	24	13	5
R - days	103	49799	10398	2576	443	252	52	62	33	30	11	36
Monthly	51	17511	5251	60065	641	305	151	51	37	32	13	15
Penganga at P.G.Bridge (Godavari)												
01-10 days	3	3	30	71890	28	5	0	1	0	0	0	0
11-20 days	7	1	8	2235	27	3	0	0	0	1	0	0
R - days	2	120	16860	173	12	1	0	0	0	1	0	0
Monthly	4	41	5633	24766	22	3	0	0	0	1	0	0
Wunna at Nandgaon												
01-10 days	1	N.A.	31	2719	3	9	12	9	10	7	0	0
11-20 days	0	1341	3	1237	20	8	6	7	4	2	0	0
R - days	0	1688	66	17	12	14	8	14	5	0	0	0
Monthly	0	1515	33	1324	12	10	9	10	6	3	0	0
Wardha at Hivra												
01-10 days	N.A.	0	308	4064	0	0	10	0	0	9	0	0
11-20 days	14	393	8	861	0	0	1	0	0	5	0	80
R - days	1	13439	1543	2	0	0	1	0	0	0	0	60
Monthly	8	4611	620	1642	0	0	4	0	0	5	0	47
Wainganga at Asthi												
01-10 days	13	148	45651	85645	1388	830	50	63	190	71	31	37
11-20 days	64	8554	12963	16169	2456	529	49	220	182	189	34	48
R - days	97	140587	5643	4226	1431	247	44	173	114	90	32	17
Monthly	58	49763	21419	35347	1758	535	48	152	162	117	32	34
Kanhan at Satrapur												
01-10 days	50	17	593	6910	104	58	10	10	3	12	3	2
11-20 days	253	5368	269	683	127	43	7	10	2	5	3	2
R - days	152	44325	602	309	85	28	7	7	2	7	5	2
Monthly	152	16570	488	2634	105	43	8	9	2	8	4	2

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

IV Basin : Godavari											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Khanan at Ramakona (Godavari)												
01-10 days	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	4	16	0	3	1	0
11-20 days	N.A.	N.A.	N.A.	N.A.	N.A.	76	2	7	0	7	5	0
R - days	N.A.	N.A.	N.A.	N.A.	N.A.	14	2	2	1	3	1	0
Monthly	N.A.	N.A.	N.A.	N.A.	N.A.	45	3	8	0	4	2	0
Bagh at Rajegaon (Godavari)												
01-10 days	N.A.	N.A.	N.A.	6500	522	402	2	2	2	12	0	0
11-20 days	N.A.	N.A.	N.A.	1582	2967	230	3	2	1	1	0	0
R - days	N.A.	N.A.	3186	1193	1084	62	3	2	1	1	0	0
Monthly	N.A.	N.A.	3186	3092	1524	231	3	2	1	5	0	0
Wainganga at Kumhari (Godavari)												
01-10 days	N.A.	N.A.	N.A.	2640	44	22	26	39	29	89	3	1
11-20 days	N.A.	N.A.	N.A.	3290	80	15	32	35	31	9	3	1
R - days	N.A.	N.A.	N.A.	173	63	25	31	35	14	5	1	1
Monthly	N.A.	N.A.	N.A.	2034	62	21	30	36	25	34	2	1
Wardha at Sakmur (Sirpur) (Godavari)												
01-10 days	5	15	8262	22520	62	11	4	5	5	2	1	0
11-20 days	9	624	2096	2694	32	5	5	6	2	1	1	0
R - days	31	68772	599	379	14	4	3	9	2	1	0	32
Monthly	15	23137	3652	8531	36	7	4	7	3	1	1	11
Godavari at Mancherial												
01-10 days	6	5	24	7925	125	34	7	10	5	1	0	0
11-20 days	5	7	13	480	50	11	9	9	4	0	0	0
R - days	5	17	6	190	83	3	10	8	3	1	0	0
Monthly	5	10	14	2865	86	16	9	9	4	1	0	0
Manjira at Saigaon (Godavari)												
01-10 days	0	0	0	145	0	0	0	0	0	0	0	0
11-20 days	0	0	0	0	0	0	0	0	0	0	0	0
R - days	0	0	161	0	0	0	0	0	0	0	0	0
Monthly	0	0	54	48	0	0	0	0	0	0	0	0

Source: Suspended Sediment Data Year Book (2014 - 2015) Godavari Basin.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

V Basin : Krishna											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Krishna at Vijayawada												
01-10 days	0	0	0	0	310	0	0	0	0	0	0	0
11-20 days	0	0	0	1744	0	0	0	0	0	0	0	0
R - days	0	0	0	2933	690	0	0	0	0	0	0	0
Monthly	0	0	0	1559	333	0	0	0	0	0	0	0
Munneru at Keesara (Krishna)												
01-10 days	34	9	80	800	215	264	276	99	22	3	0	2
11-20 days	5	9	4	603	167	337	238	107	33	8	4	1
R - days	0	153	860	856	1602	306	131	44	6	0	5	1
Monthly	13	57	315	753	661	302	215	83	20	4	3	1
Wyra at Madhira (Krishna)												
01-10 days	0	0	0	4	2	4	4	1	1	3	0	2
11-20 days	0	0	0	31	2	5	4	1	1	8	4	1
R - days	0	1	0	17	16	4	3	1	1	0	5	1
Monthly	0	0	0	17	7	4	4	1	1	4	3	1
Paleru at Paleru Bridge (Krishna)												
01-10 days	0	0	0	1	5	97	24	11	6	9	4	8
11-20 days	0	0	0	7	61	91	22	14	7	2	10	6
R - days	0	0	1	6	657	52	8	16	1	8	5	4
Monthly	0	0	0	5	241	80	18	14	5	6	6	6
Krishna at Wadenapally												
01-10 days	15	86	40	124	165	80	43	18	23	32	25	3
11-20 days	4	108	190	471	172	55	19	39	25	20	25	3
R - days	23	58	144	245	158	65	24	28	15	33	10	5
Monthly	14	84	125	280	165	67	29	28	21	28	20	4
Musi at Damerachela (Krishna)												
01-10 days	2	0	0	18	89	98	76	21	35	33	24	24
11-20 days	0	0	0	463	99	445	30	27	34	31	22	7
R - days	0	0	10	98	510	83	38	27	13	37	22	2
Monthly	1	0	3	193	233	209	48	25	27	34	23	11

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

V	Basin : Krishna										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Tungabhadra at Bawapuram (Krishna)												
01-10 days	68	0	20020	8143	2561	388	7	5	2	6	3	2
11-20 days	2	0	6696	5396	349	542	45	6	4	7	1	
R - days	1	0	23389	1472	1451	166	7	7	3	3	6	2
Monthly	24	0	16702	5004	1454	365	20	6	3	5	3	2
Tungabhadra at Mantralayam (Krishna)												
01-10 days	60	0	20848	13328	1470	366	192	40	81	372	35	29
11-20 days	31	47	5040	5274	665	324	410	281	173	1719	61	51
R - days	1	0	45732	788	6976	163	101	187	93	33	70	45
Monthly	31	16	23873	6463	3037	284	234	169	116	708	55	42
Varada at Marol (Krishna)												
01-10 days	0	0	4237	588	107	35	0	0	0	0	0	0
11-20 days	0	2580	578	113	55	0	0	0	0	0	0	0
R - days	48	5805	2247	47	24	0	0	0	0	0	0	0
Monthly	16	2795	2354	249	62	12	0	0	0	0	0	0
Tungabhadra at Haralahalli (Krishna)												
01-10 days	11	8	113044	5592	348	69	13	1	0	0	0	17
11-20 days	0	5030	9193	372	351	105	26	0	0	2	1	91
R - days	626	18283	1085	638	432	41	8	0	0	0	5	74
Monthly	212	7774	41107	2201	377	72	16	0	0	1	0	61
Haridra at Byladahalli (Krishna)												
01-10 days	0	0	16	32	81	12	2	0	0	0	0	0
11-20 days	0	0	13	5	89	40	1	0	0	0	0	0
R - days	0	2	119	58	198	8	0	0	0	0	0	0
Monthly	0	1	49	32	123	20	1	0	0	0	0	0
Kumudavathi at Kuppelur (Krishna)												
01-10 days	0	0	7323	395	397	54	0	0	0	0	0	0
11-20 days	0	0	529	94	906	106	0	0	0	0	0	0
R - days	0	1076	603	168	168	2	0	0	0	0	0	0
Monthly	0	359	2818	219	490	54	0	0	0	0	0	0

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

V Basin : Krishna Unit : Tonnes per day												
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Tungabhadra at Honnali (Krishna)												
01-10 days	7	23	16434	805	115	48	24	8	11	10	10	22
11-20 days	4	1306	863	197	79	55	30	9	12	12	11	40
R - days	100	4003	571	96	96	29	13	9	10	10	26	17
Monthly	37	1777	5956	366	97	44	22	9	11	11	16	26
Tunga at Shimoga (Krishna)												
01-10 days	3	44	82893	3559	442	22	20	7	1	4	5	8
11-20 days	1	25222	4796	261	196	29	16	1	2	2	3	11
R - days	434	46479	3291	2742	68	20	7	1	1	2	9	1
Monthly	146	23915	30327	2187	235	24	14	3	1	3	6	7
Bhima at Yadgir (Krishna)												
01-10 days	0	0	0	13216	191	0	0	0	0	0	0	0
11-20 days	0	174	147	5486	238	0	0	0	0	0	0	0
R - days	0	36	4128	2259	0	0	0	0	0	0	0	0
Monthly	0	70	1425	6987	143	0	0	0	0	0	0	0
Kagna at Malkhed (Krishna)												
01-10 days	2	27	6	3206	358	20	13	12	6	4	3	3
11-20 days	4	30	4	1346	60	20	15	9	4	8	122	3
R - days	16	5	3036	1353	29	6	11	9	4	4	7	1
Monthly	7	21	1015	1968	149	15	13	10	5	5	0	2
Nira at Sarati (Krishna)												
01-10 days	0	0	209	260	0	0	260	0	0	0	0	0
11-20 days	0	0	78	123	0	0	123	0	0	0	0	0
R - days	0	0	156	48	0	0	48	0	0	0	0	0
Monthly	0	0	148	144	0	0	144	0	0	0	0	0
Krishna at Huvinhedigi												
01-10 days	33	25	42689	24758	403	330	151	291	132	111	83	37
11-20 days	28	33	8253	7196	290	355	185	85	65	108	56	90
R - days	31	11262	18341	1607	460	214	98	155	201	151	34	22
Monthly	31	3773	23094	11187	384	300	145	177	133	123	58	50

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

V Basin : Krishna											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Bhima at Takali (Krishna)												
01-10 days	0	0	53	4356	0	0	0	0	0	0	0	0
11-20 days	0	0	58	1298	0	0	0	0	0	0	0	0
R - days	0	0	829	49	0	0	0	0	0	0	0	0
Monthly	0	0	313	1901	0	0	0	0	0	0	0	0
Malaprabha at Chalachagudda (Seasonal) (Krishna)												
01-10 days	779	201	111	331	353	156	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11-20 days	83	34	269	165	123	299	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
R - days	56	9	1319	204	167	343	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Monthly	306	81	566	233	214	266	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Krishna at Kurundwad												
01-10 days	0	0	29382	11331	291	0	0	0	0	0	0	0
11-20 days	0	12066	2902	3137	103	0	0	0	0	0	0	0
R - days	0	60366	4566	304	0	0	0	0	0	0	0	0
Monthly	0	24144	12283	4924	131	0	0	0	0	0	0	0
Krishna at Karad												
01-10 days	0	0	7285	2442	0	0	0	0	0	0	0	0
11-20 days	0	2582	1131	1436	0	0	0	0	0	0	0	0
R - days	0	10036	0	0	0	0	0	0	0	0	0	0
Monthly	0	4206	2805	1293	0	0	0	0	0	0	0	0
Koyna at Warunji (Krishna)												
01-10 days	0	0	3279	1797	0	0	0	0	0	0	0	0
11-20 days	0	1233	589	737	0	0	0	0	0	0	0	0
R - days	0	4147	0	0	0	0	0	0	0	0	0	0
Monthly	0	1793	1289	845	0	0	0	0	0	0	0	0

Source : Suspended Sediment Data Year book (2014 - 2015) Krishna Basin.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

VI	Basin : Cauvery										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Thirumalairajanar at Thengudi (Cauvery)												
01-10 days	0	1	0	3	2	9	4	1	1	0	0	0
11-20 days	0	0	0	1	11	14	6	1	1	0	0	5
R - days	0	0	1	2	27	5	3	0	1	0	0	0
Monthly	0	0	0	2	13	9	4	1	1	0	0	2
Cauvery at Musiri												
01-10 days	0	1	85	724	682	326	523	394	63	6	0	37
11-20 days	0	0	611	747	445	404	721	339	2	3	27	10
R - days	0	63	946	487	1201	87	94	128	4	0	72	5
Monthly	0	21	547	653	776	272	446	287	23	3	33	17
Amaravathy at Nallamaranpatty (Cauvery)												
01-10 days	0	0	0	0	1	18	3	0	4	0	0	0
11-20 days	0	0	0	0	5	5	2	0	0	0	0	4
R - days	0	2	0	2	1643	0	5	0	0	0	0	3
Monthly	0	1	0	1	550	8	3	0	1	0	0	2
Noyyal at Elunuthimangalam (Cauvery)												
01-10 days	0	0	0	0	2	69	10	9	4	5	2	6
11-20 days	0	0	0	0	10	50	10	5	2	9	93	38
R - days	0	0	0	4	37	9	7	6	0	5	94	131
Monthly	0	0	0	1	16	43	9	7	2	6	63	58
Cauvery at Kodumudi												
01-10 days	6	18	84	1475	1169	144	621	416	128	58	33	53
11-20 days	7	8	774	1797	986	91	870	597	22	11	58	15
R - days	23	79	1448	1142	279	105	85	303	43	16	86	21
Monthly	12	35	769	1471	811	113	525	439	64	28	59	30
Bhavani at Savandapur (Cauvery)												
01-10 days	4	3	20	18	9	40	9	13	5	17	6	3
11-20 days	3	17	27	17	11	34	10	6	5	18	7	2
R - days	2	18	47	95	3043	7	19	9	10	7	4	1
Monthly	3	13	31	43	1021	27	13	9	7	14	6	2

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

VI Basin : Cauvery		Unit : Tonnes per day										
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Moyar at Thengumarahada (Cauvery)												
01-10 days	3	0	1	1	6	1	0	0	0	0	0	0
11-20 days	0	8	1	1	2	2	0	0	0	0	0	1
R - days	0	5	1	5	7	0	0	0	0	0	0	0
Monthly	1	4	1	2	5	1	0	0	0	0	0	0
Bhavani at Nellithurai (Cauvery)												
01-10 days	2	12	112	156	90	69	146	13	20	3	20	3
11-20 days	28	121	86	60	104	252	104	3	3	26	3	1
R - days	47	159	87	132	492	83	104	5	3	2	6	1
Monthly	26	97	95	116	229	135	118	7	9	10	10	2
Cauvery at Urachikottai												
01-10 days	0	28	62	612	482	160	305	312	88	0	31	66
11-20 days	0	13	419	636	407	211	399	368	10	0	6	0
R - days	37	52	586	572	23	100	110	213	53	0	90	0
Monthly	12	31	356	607	304	157	271	298	50	0	42	22
Palar at Kudlur (Cauvery)												
01-10 days	0	0	0	0	20	3	0	0	0	0	0	7
11-20 days	0	0	0	0	9	3	1	0	0	0	0	60
R-days	0	0	49	381	97	2	0	0	0	0	0	0
Monthly	0	0	16	127	42	3	0	0	0	0	0	22
Cauvery at Biligundulu												
01-10 days	56	62	1413	423	305	163	119	61	20	30	40	51
11-20 days	22	140	440	242	289	189	117	28	16	17	29	107
R - days	78	503	210	463	345	166	60	39	18	24	62	69
Monthly	52	235	688	376	313	173	99	43	18	24	44	76
Arkavathi at T. Bekuppe (Cauvery)												
01-10 dyas	82	24	13	26	104	37	27	15	14	16	10	26
11-20 days	27	8	23	65	59	32	16	14	14	13	28	31
R-days	15	12	14	81	64	28	16	20	12	11	20	32
Monthly	41	15	17	57	76	32	20	16	13	13	19	30
Shimsha at T.K.Halli (Cauvery)												
01-10 days	44	0	0	7	73	20	12	6	1	0	0	0
11-20 days	1	0	0	6	55	32	18	0	0	0	0	13
R - days	1	0	5	256	89	19	6	1	0	0	1	43
Monthly	15	0	2	90	72	24	12	2	0	0	0	19

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

VI Basin : Cauvery		Unit : Tonnes per day										
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Cauvery at Kollegal												
01-10 days	9	10	3080	355	155	88	60	22	26	9	6	9
11-20 days	5	207	397	139	149	88	37	19	0	0	6	15
R - days	20	732	134	241	162	77	23	16	0	0	12	11
Monthly	11	316	1204	245	155	84	40	19	9	3	8	12
Kabini at T.Narasipur (Cauvery)												
01-10 days	8	10	3529	840	223	56	21	6	0	6	5	4
11-20 days	1	401	602	187	282	40	18	0	0	2	4	41
R - days	42	2149	123	627	142	30	8	0	0	0	7	11
Monthly	17	853	1418	551	216	42	16	2	0	3	5	19
Kabini at Muthankera (Cauvery)												
01-10 days	84	96	3006	1547	637	76	47	21	2	3	8	10
11-20 days	1217	1457	1099	292	256	87	142	15	0	2	10	343
R - days	842	2694	2154	426	337	41	27	10	0	0	4	10
Monthly	714	1416	2086	755	410	68	72	15	1	2	7	121
Hemavathi at Akkihebbal (Cauvery)												
01-10 days	34	24	2011	725	226	61	44	25	5	7	6	6
11-20 days	7	237	342	79	135	56	54	14	3	7	6	16
R-days	7	27	110	637	219	34	58	11	5	5	9	15
Monthly	16	96	821	480	193	50	52	17	4	6	7	12
Hemavathi at M.H.Halli (Cauvery)												
01-10 days	0	2	386	148	21	21	19	9	6	18	14	1
11-20 days	0	35	99	18	38	22	16	9	3	13	13	6
R - days	19	0	19	27	21	20	10	3	7	14	11	0
Monthly	6	12	168	64	27	21	15	7	5	15	13	2
Hemavathi at Sakleshpur (Cauvery)												
01-10 days	0	6	2735	325	83	21	14	4	1	0	0	1
11-20 days	500	1220	307	60	58	20	19	2	1	1	1	10
R-days	67	2758	145	168	54	13	8	2	0	0	3	2
Monthly	189	1328	1062	184	65	18	14	3	1	0	1	4
Cauvery at Kudige												
01-10 days	2	16	601	419	49	12	8	6	2	1	1	2
11-20 days	111	1014	111	31	27	11	8	6	2	1	1	1
R - days	244	1763	197	25	30	7	19	3	1	1	1	4
Monthly	119	931	303	158	35	10	12	5	2	1	1	2

Source: Suspended Sediment Data Year Book (2014 - 2015) Cauvery Basin

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

VII Basin : Pennar											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Pennar at Nellore (Pennar)												
01-10 days	0	0	0	0	0	0	0	0	0	0	2	0
11-20 days	0	0	0	0	1	0	37	0	0	0	1	0
R - days	0	0	0	0	3	0	0	0	0	0	1	0
Monthly	0	0	0	0	1	0	12	0	0	0	1	0
Sagileru at Nandipalli (Pennar)												
01-10 days	0	0	0	0	0	0	0	0	0	0	0	0
11-20 days	0	0	0	0	0	1	0	0	0	0	0	0
R - days	0	0	0	0	2	0	0	0	0	0	0	0
Monthly	0	0	0	0	1	0	0	0	0	0	0	0
Pennar at Chennur (Pennar)												
01-10 days	22	15	0	2946	3154	864	384	30	2	0	5	13
11-20 days	15	35	30	10988	2424	1196	150	9	0	2	9	8
R - days	8	0	12435	5968	9424	475	88	4	0	6	4	4
Monthly	15	17	4155	6634	5001	845	207	14	1	3	6	8
Kunderu at Alladupalli (Pennar)												
01-10 days	72	21	0	3841	3048	1151	807	182	18	0	64	40
11-20 days	32	40	60	9478	1643	2346	449	48	0	11	92	34
R - days	8	1	2975	3519	2692	1007	494	54	0	57	55	15
Monthly	37	21	1012	5613	2461	1501	583	95	6	23	70	30

Source: Suspended Sediment Data Year Book (2014 - 2015) Pennar Basin

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

VIII Basin : East Flowing Rivers From Mahanadi to Pennar												Unit : Tonnes per day
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Gunupur (Vamsadhara) (EMP)												
01-10 days	51	233	58715	118199	1257	N.A	86	110	21	21	32	126
11-20 days	50	11210	12612	25335	63273	N.A	56	45	32	49	98	150
R - days	1007	19264	17394	2860	1753	N.A	38	23	46	21	332	21
Monthly	369	10236	29574	48798	22094	N.A	60	59	33	30	154	99
Kashinagar (Vamsadhara) (EMP)												
01-10 days	2013	465	28442	94541	3753	1049	16	12	3	2	1	3
11-20 days	106	22129	15537	58029	49741	380	13	8	3	2	3	3
R - days	1290	9948	26300	7627	3538	54	12	4	2	2	3	1
Monthly	1136	10847	23426	53399	19011	494	14	8	3	2	2	2
Purushottampur (Rushikulya) (EMP)												
01-10 days	2	0	6259	21306	162	34	3	2	2	0	0	0
11-20 days	0	359	1486	7953	16360	21	1	1	0	0	0	0
R - days	0	1535	2017	2795	238	18	2	1	0	0	0	0
Monthly	1	631	3254	10685	5587	24	2	1	1	0	0	0
Srikakulam (Nagavali) (EMP)												
01-10 days	451	25	21836	38978	1136	274	84	50	91	219	70	183
11-20 days	40	956	11810	11838	195796	262	85	43	103	73	244	108
R - days	9	11026	26062	10105	3141	185	51	28	25	39	174	33
Monthly	167	4002	19903	20307	66691	240	73	40	73	110	163	108
Gundlakamma at Marella (EMP)												
01-10 days	0	0	0	2	37	123	55	59	45	17	0	0
11-20 days	0	0	0	79	42	611	42	30	25	17	0	0
R - days	0	0	36	45	547	194	79	37	16	4	0	0
Monthly	0	0	12	42	209	309	59	42	29	13	0	0

Source: Suspended Sediment Data Year Book (2014 - 2015) .

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

IX	Basin : East flowing Rivers Pennar to Kanyakumari											Unit : Tonnes per day
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Swarnamukhi at Naidupeta (EPK)												
01-10 days	0	0	0	0	0	0	0	0	2	3	0	0
11-20 days	0	0	0	0	0	9	6	0	1	1	0	0
R - days	0	0	0	0	0	0	0	0	10	0	0	0
Monthly	0	0	0	0	0	3	2	0	4	1	0	0
Kalingi at Sulurpet (EPK)												
01-10 days	0	0	0	0	0	0	0	0	0	0	0	0
11-20 days	0	0	0	0	0	12	4	0	0	0	0	0
R - days	0	0	0	0	0	0	0	0	0	0	0	0
Monthly	0	0	0	0	0	4	1	0	0	0	0	0
Ponnaiyar at Vazhavachanur (EPK)												
01-10 days	0	0	0	0	1	1	0	1	0	0	0	1
11-20 days	0	0	0	0	0	1	12	0	18	0	0	0
R - days	0	0	0	0	3	1	2	0	1	0	0	0
Monthly	0	0	0	0	1	1	5	0	6	0	0	0
Ponnaiyar at Gummanur (EPK)												
01-10 days	60	21	8	3	284	38	56	16	5	10	4	30
11-20 days	19	8	6	3	233	125	22	14	5	9	43	39
R - days	2	5	9	50	430	77	17	5	2	1	46	33
Monthly	27	11	8	19	316	80	32	12	4	7	31	34
Vaigai at Paramakudi (EPK)												
01-10 days	0	0	0	0	0	0	8	0	0	0	0	0
11-20 days	0	0	0	0	0	0	0	0	0	0	0	0
R - days	0	0	0	0	0	55	0	0	0	0	0	0
Monthly	0	0	0	0	0	18	3	0	0	0	0	0
Suruliyar at Theni (EPK)												
01-10 days	0	6	276	49	304	505	264	191	43	15	19	23
11-20 days	4	45	273	49	280	110	299	142	21	21	59	76
R - days	4	143	99	237	1355	328	215	88	18	15	82	26
Monthly	3	65	216	112	646	314	259	140	27	17	53	42
Vaigai at Ambasamudram (EPK)												
01-10 days	0	0	0	0	0	54	1	0	0	0	0	0
11-20 days	0	0	0	0	2	3	6	0	0	0	0	52
R - days	0	0	0	0	177	2	2	0	0	0	0	0
Monthly	0	0	0	0	0	0	0	0	0	0	0	0
Tambraparani at Murappandu (EPK)												
01-10 days	2	3	7	10	9	9	33	16	16	12	4	3
11-20 days	2	4	7	10	32	9	194	6	15	11	6	6
R - days	2	7	10	5	99	127	49	10	12	6	7	5
Monthly	2	0	8	8	47	48	92	11	14	10	6	5

Source: Suspended Sediment Data Year Book (2014 - 2015) (East Flowing Rivers From Pennar to Kanyakumari)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

X	Basin : Narmada										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Orsang at Chandwada (Narmada)												
01-10 days	N.A.	N.A	9	677	6	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11-20 days	N.A.	15	3	176	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
R - days	N.A.	27	6	16	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Monthly	N.A.	21	6	290	2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Narmada at Garudeshwar												
01-10 days	0	0	207	6999	198	0	0	0	0	0	0	0
11-20 days	0	0	18	909	2	0	0	0	0	0	0	0
R - days	0	1321	167	443	0	0	0	0	0	0	0	0
Monthly	0	440	131	2784	67	0	0	0	0	0	0	0
Narmada at Mandleshwar												
01-10 days	424	362	1231	31466	1061	1692	951	2463	1198	1337	2106	1149
11-20 days	651	339	2527	13938	1070	558	760	1575	1174	838	1275	1977
R - days	775	5385	5710	4144	710	707	1256	1428	1495	1419	1452	1029
Monthly	617	2029	3156	16516	947	986	989	1822	1289	1198	1611	1385
Narmada at Handia												
01-10 days	74	86	103824	28932	3599	123	356	743	294	867	870	524
11-20 days	73	1637	48922	29689	515	395	650	351	443	969	762	460
R - days	80	86925	16543	10203	406	771	753	346	650	808	475	396
Monthly	76	29549	56430	22941	1507	430	586	480	462	881	702	460
Narmada at Hoshangabad												
01-10 days	323	198	994020	109029	1701	1331	587	871	412	636	270	314
11-20 days	282	6598	39390	41965	1596	700	570	508	694	453	402	552
R - days	283	165509	6290	6868	916	513	954	450	385	407	308	516
Monthly	296	57435	346567	52621	1404	848	704	610	497	499	327	461
Narmada at Sandia												
01-10 days	99	381	137508	53126	3010	846	384	363	353	356	430	291
11-20 days	151	4578	22586	45946	1761	480	397	320	363	515	389	371
R - days	379	41086	8365	5502	833	394	371	381	461	754	290	238
Monthly	210	15348	56153	34858	1868	573	384	355	392	542	370	300

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

X	Basin : Narmada										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Shakkar at Gadarwara (Narmada)												
01-10 days	N.A.	N.A.	10111	15268	104	3	1	N.A.	N.A.	N.A.	N.A.	N.A.
11-20 days	N.A.	14	3184	8027	10	2	1	N.A.	N.A.	N.A.	N.A.	N.A.
R - days	N.A.	5581	306	494	4	1	0	N.A.	N.A.	N.A.	N.A.	N.A.
Monthly	N.A.	2798	4534	7930	39	2	1	N.A.	N.A.	N.A.	N.A.	N.A.
Narmada at Barmanghat												
01-10 days	216	238	264325	21745	674	538	202	202	259	321	214	540
11-20 days	271	1645	30168	15641	999	285	230	139	467	297	836	217
R - days	253	68846	6580	1667	698	200	188	194	745	258	673	181
Monthly	247	23576	100358	13018	790	341	207	178	490	292	574	313
Banjar at Bamini (Narmada)												
01-10 days	N.A.	8	3556	789	221	194	106	24	8	8	1	N.A.
11-20 days	N.A.	305	1109	1288	569	187	68	18	6	3	1	N.A.
R - days	10	2991	696	440	259	143	44	12	3	2	0	N.A.
Monthly	10	1101	1787	839	350	175	73	18	6	4	1	N.A.
Burhner at Mohgaon (Narmada)												
01-10 days	1	142	42535	16017	56	91	45	73	27	173	14	19
11-20 days	103	17350	3965	5724	33200	71	98	38	25	30	12	1
R - days	979	50091	1179	809	177	66	110	25	19	49	8	1
Monthly	361	22528	15893	7517	11144	76	84	45	24	84	11	7
Narmada ar Manot												
01-10 days	0	42	57805	3222	137	145	20	13	5	8	5	2
11-20 days	20	2697	6194	2015	5696	123	15	10	3	10	4	1
R - days	100	17441	945	242	316	38	10	6	5	12	3	1
Monthly	40	6727	21648	1826	2050	102	15	10	4	10	4	1

Source : Suspended Sediment Data Year Book (2014 - 2015) Narmada Basin.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XI Basin : Tapi											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Tapi at Burhanpur (Tapi)												
01-10 days	0	0	8150	173836	319	27	2	0	0	0	0	0
11-20 days	0	7361	1262	7239	187	94	0	0	0	0	0	0
R - days	0	611773	22300	934	52	6	0	0	0	0	0	0
Monthly	0	206378	10571	60670	186	42	1	0	0	0	0	0
Tapi at Gopalkheda (Tapi)												
01-10 days	0	0	3281	263863	241	0	0	0	0	0	0	0
11-20 days	0	740	274	12765	90	0	0	0	0	0	0	0
R - days	2	182777	14009	1360	8	0	0	0	0	0	0	0
Monthly	1	61172	5855	92663	113	0	0	0	0	0	0	0
Purna at Yerli(Tapi))												
01-10 days	0	0	5418	208423	125	0	0	4111	0	2	0	0
11-20 days	0	37	0	24000	1	0	0	0	0	0	13	0
R - days	145	208335	26696	1214	0	0	0	0	0	0	0	0
Monthly	48	69457	10705	77879	42	0	0	1370	0	1	4	0
Tapi at Sarangkheda(Tapi)												
01-10 days	0	0	25544	101654	0	0	0	0	0	0	0	0
11-20 days	0	0	377	0	0	0	0	0	0	0	0	0
R - days	0	708348	2579	0	0	0	0	0	0	0	0	0
Monthly	0	236116	9500	33885	0	0	0	0	0	0	0	0
Purna at Mahuwa												
01-10 days	0	0	703	1084	2	0	0	0	0	0	0	0
11-20 days	0	0	130	238	0	0	0	0	0	0	0	0
R - days	0	6619	161	11	0	0	0	0	0	0	0	0
Monthly	0	2206	331	444	1	0	0	0	0	0	0	0
Ambika at Gadat												
01-10 days	0	N.A.	428	1164	39	0	0	0	0	0	0	0
11-20 days	0	84	282	1445	0	0	0	0	0	0	0	0
R - days	0	2382	355	181	0	0	0	0	0	0	0	0
Monthly	0	1233	355	930	13	0	0	0	0	0	0	0
Vaitarna at Durvesh												
01-10 days	0	0	26341	35785	324	0	0	0	0	0	0	0
11-20 days	0	2831	2396	3253	110	0	0	0	0	0	0	0
R - days	0	52807	2236	576	0	0	0	0	0	0	0	0
Monthly	0	18546	10324	13205	145	0	0	0	0	0	0	0

Source: Suspended Sediment Data Year Book (2014 - 2015) Tapi Basin.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XII Basin : West Flowing Rivers From Tapi to Tadri												Unit : Tonnes per day
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Ulhas at Badlapur (WTT)												
01-10 days	Sediment observations from 22-12-2014.						N.A.	34	35	22	29	28
11-20 days							N.A.	33	41	37	32	26
R - days							33	39	36	28	42	42
Monthly							33	35	37	29	34	32

Source: Suspended Sediment Data Year Book (2014 - 2015) (West Flowing Rivers From Tapi to Tadri)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XIII Basin : West Flowing Rivers From Tadri to Kanyakumari											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Nehravathi at Bantwal (WTK)												
01-10 days	23	172	45763	1961	359	103	19	0	0	0	6	0
11-20 days	441	10277	2063	905	329	90	24	0	0	4	0	0
R - days	394	6775	1487	475	269	44	0	0	0	24	14	0
Monthly	286	5741	16438	1114	319	79	14	0	0	9	7	0
Payaswani at Erinjipuzha (WTK)												
01-10 days	16	115	6202	3337	979	336	31	4	1	0	0	3
11-20 days	183	4378	2146	1288	735	337	38	3	0	2	0	18
R - days	278	2103	1479	1405	1020	89	8	4	0	0	2	17
Monthly	159	2199	3276	2010	911	254	26	4	0	1	1	13
Valapatanam at Perumannu (WTK)												
01-10 days	3	151	3794	1014	102	116	13	8	1	1	2	10
11-20 days	575	3510	446	266	135	46	26	4	5	2	1	57
R - days	4237	2336	521	265	193	37	17	8	1	1	37	2
Monthly	1605	1999	1587	515	143	66	19	7	2	1	13	23
Kuttiyadi at Kuttitadi (WTK)												
01-10 days	105	17	1982	934	384	35	1	0	0	0	0	10
11-20 days	652	4438	607	503	589	4	1	0	0	0	0	12
R-days	889	1534	604	324	375	1	0	0	0	0	0	6
Monthly	549	1996	1064	587	449	13	1	0	0	0	0	9
Chaliyar at Kuniyil (WTK)												
01-10 days	N.A.	170	4687	1807	983	550	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11-20 days	2781	3563	782	349	845	508	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
R - days	541	9130	1102	403	911	445	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Monthly	1661	4288	2190	853	913	501	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Contd/....

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XIII Basin : West Flowing Rivers From Tadri to Kanyakumari											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Kadalundi at Karathodu (WTK)												
01-10 days	N.A.	69	3741	468	294	132	0	N.A.	N.A.	N.A.	N.A.	N.A.
11-20 days	60	870	559	63	419	83	7	N.A.	N.A.	N.A.	N.A.	177
R - days	560	2707	489	88	317	39	N.A.	N.A.	N.A.	N.A.	N.A.	5
Monthly	310	1215	1596	206	343	85	4	N.A.	N.A.	N.A.	N.A.	91
Bharathapuzha at Kumbidi (WTK)												
01-10 days	24	111	25790	5871	1478	372	62	25	9	1	0	4
11-20 days	248	3215	2049	464	1641	243	37	12	3	1	2	566
R - days	3047	12681	3014	528	1182	62	16	11	2	N.A.	17	27
Monthly	1106	5336	10284	2288	1434	226	38	16	5	1	6	199
Pulanthodu at Pulamanthole (WTK)												
01-10 days	N.A.	3	376	178	123	22	3	0	0	0	0	1
11-20 days	117	94	137	42	97	11	4	0	0	0	2	13
R - days	34	175	158	34	47	4	0	0	0	0	0	2
Monthly	76	91	224	85	89	12	2	0	0	0	1	5
Bharathapuzha at Mankara (WTK)												
01-10 days	12	3	1461	793	169	223	23	21	7	6	2	16
11-20 days	23	327	168	107	300	153	30	9	5	4	33	8954
R-days	211	1225	363	177	464	36	28	11	2	2	26	81
Monthly	82	518	664	359	311	137	27	14	5	4	20	3017
Bharathapuzha at Pudur (WTK)												
01-10 days	1	0	209	110	37	26	3	5	2	3	1	2
11-20 days	4	52	16	12	12	30	4	3	3	2	5	64
R-days	97	139	55	34	47	6	4	2	2	1	4	17
Monthly	34	64	93	52	32	21	4	3	2	2	3	28
Aliyar at Ambarampalayam (WTK)												
01-10 days	5	10	13	45	32	32	19	28	29	15	6	6
11-20 days	2	6	7	14	10	51	51	30	30	10	8	44
R - days	3	8	8	91	249	22	35	25	20	8	7	8
Monthly	3	8	9	50	97	35	35	28	26	11	7	19
Contd./...												

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XIII	Basin : West Flowing Rivers From Tadri to Kanyakumari										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Chalakudy at Arangaly (WTK)												
01-10 days	10	14	284	348	74	14	1	2	0	0	0	5
11-20 days	18	61	80	28	36	6	1	1	2	0	0	4
R - days	88	185	78	21	95	4	1	1	0	0	1	6
Monthly	39	87	147	132	68	8	1	1	1	0	0	5
Periyar at Neeleswaram (WTK)												
01-10 days	159	285	2628	1201	629	403	25	21	3	4	18	38
11-20 days	155	1181	1085	359	460	100	31	13	7	7	41	89
R - days	1422	762	1424	707	908	67	31	17	3	5	63	52
Monthly	579	743	1712	756	666	190	29	17	4	5	41	60
Muvattupuzha at Ramamangalam (WTK)												
01-10 days	189	408	1555	276	1599	528	17	19	31	30	40	119
11-20 days	213	1100	229	29	327	342	60	22	25	26	48	313
R - days	515	368	1055	211	978	24	26	32	22	36	82	127
Monthly	306	625	946	172	968	298	34	24	26	31	57	186
Kaliyar at Kalampur (WTK)												
01-10 days	1	21	134	63	46	21	1	0	N.A	N.A	N.A	1
11-20 days	13	93	52	10	18	15	3	0	N.A	N.A	N.A	6
R - days	35	77	46	8	60	6	2	0	N.A	N.A	N.A	3
Monthly	16	64	77	27	41	14	2	0	N.A	N.A	N.A	3
Meenachil at Kidangoor (WTK)												
01-10 days	33	41	301	101	104	115	6	3	0	0	0	14
11-20 days	51	151	109	21	125	88	10	1	0	1	14	84
R - days	59	88	115	37	182	14	6	1	0	1	29	16
Monthly	48	93	175	53	137	72	7	2	0	1	14	38
Manimala at Kallooppara (WTK)												
01-10 days	51	47	1090	290	155	65	2	0	N.A	N.A	0	33
11-20 days	1344	134	271	11	62	46	2	0	N.A	N.A	3	29
R - days	135	51	1439	349	199	3	1	0	N.A	N.A	104	4
Monthly	510	77	933	217	139	38	2	0	N.A	N.A	36	22
Contd/...												

Contd/....

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XIII Basin : West Flowing Rivers From Tadri to Kanyakumari											Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Pamba at Malakkara (WTK)												
01-10 days	5	75	417	349	35	91	2	2	N.A.	0	0	4
11-20 days	21	228	23	12	242	11	2	0	N.A.	3	3	8
R - days	141	70	437	12	111	6	2	0	N.A.	1	111	2497
Monthly	56	124	292	124	129	36	2	1	N.A.	1	38	836
Achankovil at Thumpamon (WTK)												
01-10 days	33	16	282	139	20	24	2	0	N.A	N.A	0	1
11-20 days	78	130	14	28	83	32	10	0	N.A	N.A	7	55
R - days	104	12	527	15	109	10	1	0	N.A	N.A	14	9
Monthly	72	53	274	61	71	22	4	0	N.A	N.A	7	22
Kallada at Pattazhy (WTK)												
01-10 days	28	41	117	769	84	123	29	22	16	13	24	36
11-20 days	61	69	40	76	138	125	26	19	10	18	38	76
R - days	81	45	713	74	176	65	23	19	7	16	68	35
Monthly	57	52	290	306	133	104	26	20	11	16	43	49
Vamanapuram at Ayilam (WTK)												
01-10 days	66	101	241	288	134	118	67	N.A.	N.A.	13	N.A.	27
11-20 days	124	27	113	93	215	232	54	N.A.	N.A.	N.A.	N.A.	24
R - days	44	72	839	79	576	111	0	N.A.	N.A.	N.A.	171	15
Monthly	78	67	398	153	308	154	40	N.A.	N.A.	13	171	22

Source: Suspended Sediment Data Year Book (2014 - 2015) (West Flowing Rivers from Tadri to Kanyakumari)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XIV Basin : Mahi		Unit : Tonnes per day										
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Mahi at Mataji												
01-10 days	0	0	551	1852	1	0	0	0	0	0	0	0
11-20 days	0	0	58	107	0	0	0	0	0	0	0	0
R - days	0	0	819	6	0	0	0	0	0	0	0	0
Monthly	0	0	476	655	0	0	0	0	0	0	0	0
Mahi at Paderdibadi												
01-10 days	0	0	54	87	10	0	0	0	0	0	0	0
11-20 days	0	4	27	57	3	0	0	0	0	0	0	0
R - days	0	16	179	25	0	0	1	0	0	0	0	0
Monthly	0	7	87	56	4	0	0	0	0	0	0	0
Mahi at Khanpur												
01-10 days	0	0	208	20574	29	3	0	0	0	0	0	0
11-20 days	0	32	48	1580	13	8	0	0	0	0	0	0
R - days	0	1164	49	32	19	6	0	0	0	0	0	0
Monthly	0	399	102	7395	20	6	0	0	0	0	0	0

Source : Suspended Sediment Data Year Book (2014 - 2015) Mahi Basin.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XV	Basin : Sabarmati										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Sabarmati at Derol Bridge (Sabarmati)												
01-10 days	0	N.A.	3	48	0	0	0	0	0	N.A.	N.A.	N.A.
11-20 days	0	0	0	10	0	0	0	0	0	N.A.	N.A.	N.A.
R - days	0	0	0	0	0	0	0	0	0	N.A.	N.A.	N.A.
Monthly	0	0	1	19	0	0	0	0	0	N.A.	N.A.	N.A.

Source : Suspended Sediment Data Year Book (2014 - 2015) Sabarmati Basin..

Table 10 : Ten daily and monthly average Sediment Load by site and river basin during 2014-15

XVI	Basin : WKS (West Flowing Rivers of Kutch & Saurashtra including Luni)										Unit : Tonnes per day	
Site / Period	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Bhadar at Ganod (WKS)												
01-10 days	0	0	0	0	0	0	0	0	0	0	0	0
11-20 days	0	0	0	0	0	0	0	0	0	0	0	0
R - days	0	0	0	0	0	0	0	0	0	0	0	0
Monthly	0	0	0	0	0	0	0	0	0	0	0	0
Shetrunji at Lowara (WKS)												
01-10 days	0	0	680	4560	0	0	0	0	0	0	0	0
11-20 days	0	226	0	0	0	0	0	0	0	0	0	0
R - days	0	105	99	0	0	0	0	0	0	0	0	0
Monthly	0	110	260	1520	0	0	0	0	0	0	0	0
Banas at Kamalpur (WKS)												
01-10 days	N.A.	N.A.	N.A.	3204	0	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11-20 days	N.A.	N.A.	N.A.	3023	0	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
R - days	N.A.	N.A.	N.A.	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Monthly	N.A.	N.A.	N.A.	2076	0	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Suspended Sediment Data Year Book (2014 - 2015) West Flowing Rivers From Katch & Saurashtra including Luni)

Tolerance and Classification

As per IS: 2296-1992, the tolerance limits of parameters are specified as per classified use of water depending on various uses of water. The following classifications have been adopted in India.

Designated Best Uses of Water

Designated Best Use	Class	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	1. Total Coliforms Organism MPN/100ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 6mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Outdoor bathing (Organised)	B	1. Total Coliforms Organism MPN/100ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 5mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	1. Total Coliforms Organism MPN/100ml shall be 5000 or less 2. pH between 6 and 9 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Propagation of Wild life and Fisheries	D	1. pH between 6.5 and 8.5 2. Dissolved Oxygen 4mg/l or more 3. Free Ammonia (as N) 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	1. pH between 6.0 and 8.5 2. Electrical Conductivity at 25 °C micro mhos/cm, maximum 2250 3. Sodium absorption Ratio Max. 26 4. Boron Max. 2mg/l
	Below - E	Not meeting any of the A, B, C,D & E criteria

Source: CPCB

Table 11: Water Quality Standards in India (Source IS 2296:1992)

S. No	Characteristics	Designated best use				
		A	B	C	D	E
1	Dissolved Oxygen (DO) mg/l. min	6	5	4	4	-
2	Biochemical Oxygen demand (BOD) mg/l.max	2	3	3	-	-
3	Total coliform organisms MPN /100 ml.max	50	500	5	-	-
4	pH value	6.5-8.5	6.5-8.5	6.0-9.0	6.5-8.5	6.0-8.5
5	Colour. Hazen units. max	10	300	300	-	-
6	Odour	Un-objectionable			-	-
7	Taste	Tasteless	-	-	-	-
8	Total dissolved solids. mg/l. max.	500	-	1500	-	2100
9	Total hardness (as CaCO ₃),mg/l.max	200	-	-	-	-
10	Calcium hardness (as CaCO ₃), mg/l.max	200	-	-	-	-
11	Magnesium hardness (as CaCO ₃), mg/l.max.	200	-	-	-	-
12	Copper (as Cu).mg/l.max	1.5	-	1.5	-	-
13	Iron (as Fe). Mg/l max.	0.3	-	0.5	-	-
14	Manganese (as Mn).mg/l.max	0.5	-	-	-	-
15	Chloride (as Cl). mg/l.max	250	-	600	-	600
16	Sulphates (as SO ₄). mg/l. max	400	-	400	-	1
17	Nitrate (as NO ₃). mg/l. max	20	-	50	-	-
18	Fluorides (as F). mg/l. max	1.5	1.5	1.5	-	-
19	Phenolic compounds (as C ₂ H ₅ OH). mg/l. max	0.002	0.005	0.005	-	-
20	Mercury (as Hg). mg/l.max.	0.001	-	-	-	-
21	Cadmium (as Cd).mg/l.max	0.01	-	0.01	-	-
22	Selenium (as Se).mg/l.max	0.01	-	0.05	-	-
23	Arsenic (as As).mg/l.max	0.05	0.2	0.2	-	-
24	Cyanide (as Pb).mg/l.max	0.05	0.05	0.05	-	-
25	Lead (as Pb).mg/l.max	0.1	-	0.1	-	-
26	Zinc (as Zn).mg/l.max	15	-	15	-	-
27	Chromium (as Cr ₆₊).mg/l.max	0.05	-	0.05	-	-
28	Anionic detergents (sa MBAS). mg/l.max	0.2	1	1	-	-
29	Barium (as Ba).mg/l.max	1	-	-	-	-
30	Free Ammonia (as N)). Mg/l.max	-	-	-	1.2	-
31	Electrical Conductivity. Micromhos/cm. max.	-	-	-	-	2250
32	Sodium absorption ratio. max	-	-	-	-	26
33	Boron. Mg/l. max	-	-	-	-	2

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

I Basin : Mahanadi							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Baronda			DO = 6.0	01/08/2014		
2	Rajim			BOD = 2.6 DO = 5.6	01/08/2014 01/08/2014	pH = 8.7 BOD = 2.5	01/01/2015 01/11/2014
3	Basantpur	DO = 5.9	01/04/2015	pH = 8.8 pH = 8.9 DO = 5.6	01/07/2014 01/08/2014 01/08/2014		
4	Pathardih			DO = 1.2 DO = 0.7 DO = 1.3 DO = 1.5	01/07/2014 01/08/2014 01/09/2014 01/10/2014	BOD = 4.1 DO = 4.1	01/11/2014 01/11/2014
5	Singa			pH = 8.6 DO = 3.4 DO = 5.8 DO = 5.6 DO = 4.1	01/07/2014 02/06/2014 01/07/2014 01/08/2014 01/10/2014	pH = 8.5 pH = 8.5	01/01/2015 02/02/2015
6	Andhiarkore	pH = 8.7 BOD = 2.8 DO = 6.0	02/03/2015 02/03/2015 01/05/2015	pH = 8.7 DO = 5.0	01/07/2014 01/07/2014	pH = 8.5 BOD = 2.8	02/02/2015 02/02/2015
7	Ghatora	BOD = 4.8	02/03/2015	BOD = 5.4 DO = 5.8 DO = 5.2	01/07/2014 02/06/2014 01/10/2014	BOD = 2.7 BOD = 3.0 BOD = 4.8 BOD = 3.7 DO = 5.9	01/11/2014 01/12/2014 01/01/2015 02/02/2015 02/02/2015
8	Jondhra			BOD = 2.7 DO = 5.2	01/08/2014 01/08/2014		
9	Rampur			pH = 8.5 DO = 5.7	01/07/2014 01/07/2014		
10	Manendragarh	BOD = 21.0 DO = 4.7	01/03/2015 01/04/2015	pH = 8.7 DO = 5.3 DO = 4.2 DO = 5.8	01/07/2014 01/07/2014 01/08/2014 01/09/2014	BOD = 6.6 DO = 5.9	01/02/2015 01/12/2014
11	Bannidhi	pH = 8.9 DO = 5.8 DO = 3.4	02/03/2015 01/04/2015 01/05/2015	DO = 3.2 DO = 5.0 DO = 5.3 DO = 4.3	02/06/2014 01/07/2014 01/08/2014 01/10/2014	pH = 8.5	01/01/2015
12	Kurubhata	pH = 8.9	02/03/2015				
13	Sundergarh	pH = 8.6	02/03/2015	DO = 5.9	01/07/2014	pH = 8.5 pH = 8.5	01/01/2015 02/02/2015
14	Salebhata	pH = 8.7 BOD = 2.3	02/03/2015 01/04/2015	pH = 8.6 DO = 5.3	02/06/2014 01/08/2014	pH = 8.6 pH = 8.5	01/11/2014 01/01/2015
15	Kesinga	pH = 8.9 pH = 8.6	02/03/2015 01/04/2015				
16	Kantamal	pH = 8.7	02/03/2015	pH = 8.5 DO = 4.7 DO = 5.7	01/07/2014 02/06/2014 01/09/2014	pH = 8.5 pH = 8.5 pH = 8.7	01/11/2014 01/12/2014 01/01/2015
17	Tikarpara	DO = 5.2	02/03/2015	DO = 5.8	01/08/2014		

Source: Water Quality Data Book (June 2014 to May 2015) Mahanadi Basin.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

II Basin : Subernarekha & Burhabalang		Complete					
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Anandpur	DO = 6.0	01/05/2015	DO = 6.0 DO = 6.0 DO = 5.8 DO = 2.8	02/06/2014 01/08/2014 01/09/2014 01/10/2014		
2	Muri	pH = 8.6 DO = 5.8 DO = 4.0 DO = 5.6	02/03/2015 02/03/2015 01/04/2015 01/05/2015	DO = 4.8 DO = 5.0	01/07/2014 01/09/2014		
3	Adityapur	BOD = 60.0 BOD = 40.0 DO = 0.6 DO = 1.2 DO = 4.0	02/03/2015 01/04/2015 02/03/2015 01/04/2015 01/05/2015	DO = 4.0 DO = 4.8 DO = 6.0	02/06/2014 01/07/2014 01/09/2014	pH = 8.5 pH = 8.8 BOD = 8.7 BOD = 20.0 DO = 3.8	01/11/2014 01/12/2014 01/01/2015 02/02/2015 02/02/2015
4	Jamshedpur	BOD = 2.0 DO = 4.6 DO = 5.0 DO = 3.6	01/04/2015 02/03/2015 01/04/2015 01/05/2015	BOD = 2.6 BOD = 2.2 DO = 3.6 DO = 5.0 DO = 5.8 DO = 5.8	02/06/2014 01/08/2014 02/06/2014 01/07/2014 01/09/2014 01/10/2014	BOD = 40.0 DO = 4.6 DO = 4.2	01/01/2015 01/01/2015 02/02/2015
5	Ghatshila	BOD = 2.0 DO = 5.2 DO = 6.0 DO = 5.8	01/05/2015 02/03/2015 01/04/2015 01/05/2015	DO = 5.0 DO = 4.6 DO = 5.8 DO = 5.4 DO = 6.0	02/06/2014 01/07/2014 01/08/2014 01/09/2014 01/10/2014		
6	Ghatshila Road Bridge	BOD = 2.6 DO = 5.0 DO = 5.0 DO = 6.0	01/05/2015 02/03/2015 01/04/2015 01/05/2015	DO = 5.2 DO = 6.0	02/06/2014 01/07/2014	BOD = 2.4	01/01/2015
7	Baridhi - Nala	BOD = 40.0 BOD = 99.0 BOD = 40.0 DO = 0.6 DO = 1.0 DO = 0.8	02/03/2015 01/04/2015 01/05/2015 02/03/2015 01/04/2015 01/05/2015	BOD = 40.0 BOD = 39.0 BOD = 40.0 BOD = 40.0 DO = 2.2 DO = 0.1 DO = 5.2 DO = 1.0 DO = 0.6	02/06/2014 01/07/2014 01/09/2014 01/10/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014 01/10/2014	BOD = 20.0 BOD = 4.0 BOD = 20.0 DO = 1.0 DO = 0.6	01/12/2014 01/01/2015 02/02/2015 01/12/2014 02/02/2015
8	Kulpatanga	BOD = 2.2 DO = 4.6 DO = 5.4 DO = 5.6	01/04/2015 02/03/2015 01/04/2015 01/05/2015	DO = 6.0	01/09/2014	BOD = 2.0	01/01/2015

Source: Water Quality Data Book (June 2014 to May 2015) Subernarekha, Baitarani & Burhabalang.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

III Basin : Brahmani & Baitarani							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Tilga	DO = 6.0	01/04/2015				
2	Jaraikela	DO = 5.8	01/04/2015				
3	Panposh	DO = 5.0 DO = 3.0 DO = 5.0	02/03/2015 01/04/2015 01/05/2015	DO = 5.6 DO = 5.6	01/07/2014 01/09/2014		
4	Gomlai	DO = 5.8 DO = 6.0	02/03/2015 01/05/2015	DO = 4.8 DO = 5.0	01/07/2014 01/09/2014	BOD = 2.6 BOD = 2.0	01/11/2014 02/02/2015
5	Jenapur	DO = 6.0 DO = 5.6	02/03/2015 01/04/2015	DO = 5.6 DO = 5.8 DO = 5.8 DO = 5.8	01/07/2014 01/08/2014 01/09/2014 01/10/2014		
6	Talcher	BOD = 2.2	01/05/2015				
7	Nandira	DO = 5.8	01/05/2015			BOD = 2.0	01/11/2014
8	Kamalanaga	DO = 0.8 DO = 6.0	02/03/2015 01/05/2015	DO = 5.8 DO = 6.0	02/06/2014 01/10/2014		
9	RSP Nalla	DO = 2.8 DO = 2.6 DO = 2.8	02/03/2015 01/04/2015 01/05/2015	BOD = 3.4 BOD = 19.9 DO = 3.4 DO = 2.0 DO = 2.2 DO = 2.0	02/06/2014 01/10/2014 01/07/2014 01/08/2014 01/09/2014 01/10/2014	BOD = 3.2 BOD = 4.2 BOD = 4.6 DO = 5.2	01/12/2014 01/01/2015 02/02/2015 01/11/2014

Source: Water Quality Data Book June 2014 to May 2015) Brahamani Basin.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

IV Basin : Godavari							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Polavaram	BOD = 2.3 DO = 6.0 DO = 5.6	02/03/2015 01/04/2015 01/05/2015	DO = 5.5 DO = 5.9	01/07/2014 01/09/2014		
2	Bhadrachalam	DO = 5.5 DO = 5.2	01/04/2015 01/05/2015	DO = 5.2 DO = 5.8	02/06/2014 01/07/2014		
3	Konta	DO = 5.4 DO = 5.7	01/04/2015 01/05/2015	DO = 5.3	01/07/2014		
4	Sangam	DO = 5.6	01/05/2015				
5	Perur	DO = 6.0	01/05/2015	DO = 5.4 DO = 5.8 DO = 5.6	02/06/2014 01/07/2014 01/08/2014		
6	Pathagudem	DO = 6.0 DO = 5.5	01/04/2015 01/05/2015	DO = 5.7 DO = 6.0	02/06/2014 01/07/2014		
7	Nowrangpur	DO = 5.7 DO = 5.6	02/03/2015 01/05/2015	DO = 5.1 DO = 4.5 DO = 5.8	02/06/2014 01/07/2014 01/08/2014		
8	Tekra	pH = 8.5 BOD = 3.2 BOD = 3.3 DO = 5.4 DO = 5.6	02/03/2015 02/03/2015 06/04/2015 06/04/2015 01/05/2015	BOD = 45.0 BOD = 2.8 DO = 5.5 DO = 5.1	01/08/2014 01/09/2014 01/07/2014 01/08/2014	pH = 8.5 BOD = 2.4 BOD = 2.5	01/01/2015 01/01/2015 02/02/2015
9	Bhatpalli	BOD = 3.7 BOD = 2.8	02/03/2015 01/05/2015	BOD = 2.7 BOD = 2.1 BOD = 2.3 DO = 5.7	02/06/2014 01/08/2014 07/10/2014 01/09/2014	BOD = 2.5 BOD = 2.4 BOD = 2.5	01/11/2014 01/12/2014 01/01/2015
10	Bamni	BOD = 2.8 BOD = 4.0 BOD = 3.7 DO = 5.7	02/03/2015 06/04/2015 01/05/2015 01/05/2015	BOD = 2.8 BOD = 225.0 BOD = 55.0 BOD = 2.0 BOD = 2.3 DO = 3.0 DO = 5.0 DO = 5.5	02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014 01/07/2014 01/08/2014 01/09/2014	BOD = 3.2 BOD = 2.3 BOD = 3.5 DO = 5.7	01/11/2014 01/01/2015 02/02/2015 01/12/2014
11	P.G.Bridge	pH = 8.5 BOD = 3.5 BOD = 2.2 BOD = 2.9	01/05/2015 02/03/2015 06/04/2015 01/05/2015	BOD = 3.8 BOD = 4.0 BOD = 2.4 BOD = 2.5 DO = 5.7	02/06/2014 01/07/2014 01/08/2014 01/09/2014 01/09/2014	pH = 8.5 BOD = 2.0 BOD = 3.5 BOD = 4.0	01/01/2015 01/11/2014 01/01/2015 02/02/2015
12	Nandgaon	BOD = 2.5 BOD = 2.8 BOD = 3.4 DO = 5.6 DO = 5.6	02/03/2015 06/04/2015 01/05/2015 06/04/2015 01/05/2015	BOD = 3.1 BOD = 2.2 BOD = 2.5 DO = 5.4	01/07/2014 01/08/2014 01/09/2014 02/06/2014	BOD = 3.3 BOD = 7.0 BOD = 2.2	01/11/2014 01/12/2014 02/02/2015
13	Hivra	BOD = 3.3 BOD = 2.7 BOD = 3.1	02/03/2015 06/04/2015 01/05/2015	BOD = 2.1 BOD = 3.4 BOD = 2.6 BOD = 25.0 DO = 5.4 DO = 5.1	01/07/2014 01/08/2014 01/09/2014 07/10/2014 02/06/2014 07/10/2014	BOD = 2.5 BOD = 3.5	01/12/2014 02/02/2015
14	Asthi	pH = 8.6 BOD = 3.3 BOD = 3.7 DO = 5.7	01/05/2015 02/03/2015 06/04/2015 01/05/2015	BOD = 2.2 BOD = 2.3 DO = 5.6	01/08/2014 01/09/2014 01/09/2014	pH = 8.7 BOD = 2.7 BOD = 2.8 BOD = 3.4	01/01/2015 01/12/2014 01/01/2015 02/02/2015

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Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

IV Basin : Godavari							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
15	Pauni	BOD = 3.8 BOD = 4.8	02/03/2015 01/05/2015	BOD = 2.5 BOD = 2.8 DO = 5.6 DO = 4.9	02/06/2014 07/10/2014 02/06/2014 01/07/2014	pH = 8.5 pH = 8.6 BOD = 2.4 BOD = 2.1	01/01/2015 02/02/2015 01/11/2014 01/01/2015
16	Satrapur	BOD = 2.6 BOD = 4.0 DO = 5.9	06/04/2015 01/05/2015 02/03/2015	DO = 5.8	01/09/2014	BOD = 3.4 BOD = 2.6 BOD = 2.5 BOD = 2.2	01/11/2014 01/12/2014 01/01/2015 02/02/2015
17	Rajegaon	BOD = 2.4 DO = 5.6	02/03/2015 06/04/2014	BOD = 3.0 DO = 5.8 DO = 6.0 DO = 5.8	01/07/2014 02/06/2014 01/08/2014 01/09/2014	BOD = 2.8 BOD = 3.1 BOD = 3.8	01/12/2014 01/01/2015 02/02/2015
18	Kumhari	BOD = 3.9 DO = 5.5	02/03/2015 06/04/2015	BOD = 2.2 BOD = 2.0 BOD = 2.1 DO = 5.9	01/09/2014 07/10/2014 01/11/2014 01/07/2014	BOD = 2.1 BOD = 3.3	01/01/2015 02/02/2015
19	Sakmur	BOD = 3.7 BOD = 2.5 DO = 5.4	02/03/2015 01/05/2015 01/05/2015	BOD = 3.4 BOD = 15.0 BOD = 2.3 DO = 5.6 DO = 5.9 DO = 5.6 DO = 4.2	01/08/2014 01/09/2014 07/10/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014	BOD = 2.7 BOD = 2.1 BOD = 2.1	01/11/2014 01/12/2014 02/02/2015
20	Wairagarh			BOD = 3.4	01/09/2014	BOD = 2.5 BOD = 3.0	01/01/2015 02/02/2015
21	Ramakona	BOD = 3.9	02/03/2015	BOD = 2.9 BOD = 3.8 BOD = 2.4 BOD = 4.9 DO = 6.0	02/06/2014 01/07/2014 01/09/2014 07/10/2014 01/09/2014	BOD = 2.9 BOD = 4.2 BOD = 25.0 DO = 3.8	01/12/2014 01/01/2015 02/02/2015 02/02/2015
22	Keolari	BOD = 3.0 BOD = 2.0	02/03/2015 06/04/2015	BOD = 2.5 BOD = 2.6 BOD = 40.0 BOD = 45.0 BOD = 3.0 DO = 5.8 DO = 4.3 DO = 4.4 DO = 4.0 DO = 5.5	02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014	BOD = 3.3 BOD = 2.8	01/11/2014 02/02/2015
23	Mancheria	DO = 5.5	01/04/2015	DO = 4.4 DO = 5.0 DO = 5.0 DO = 6.0	02/06/2014 01/07/2014 01/08/2014 01/09/2014	BOD = 2.3 DO = 5.8 DO = 5.3	01/12/2014 01/12/2014 01/01/2015
24	Purna			DO = 5.1	01/09/2014		
25	Kopergaon			BOD = 2.0 DO = 6.0 DO = 5.9	01/09/2014 01/08/2014 01/09/2014		
26	Pachegaon	DO = 5.8	15/03/2015				

Source: Water Quality Data Book (June 2014 to May 2015) Godavari Basin.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

V Basin : Krishna							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Vijayawada			pH = 8.6	01/10/2014		
2	Keesara	DO = 4.5 DO = 4.5	02/03/2015 01/05/2015	DO = 5.5 DO = 5.8	01/08/2014 01/10/2014	DO = 5.0	02/02/2015
3	Madhira	pH = 8.7 DO = 5.1 DO = 4.7 DO = 5.0	01/04/2015 02/03/2015 01/04/2015 01/05/2015	pH = 8.6 DO = 4.7 DO = 5.4	01/09/2014 01/08/2014 01/10/2014	DO = 5.4	02/02/2015
4	Paleru Bridge	DO = 0.7 DO = 4.8 DO = 5.4	02/03/2015 01/04/2015 01/05/2015	pH = 8.5 DO = 3.7 DO = 3.4 DO = 6.0 DO = 4.3	01/09/2014 02/06/2014 01/07/2014 01/09/2014 01/10/2014	DO = 4.6 DO = 4.9	01/01/2015 02/02/2015
5	Wadenapally	pH = 8.6 DO = 5.4 DO = 5.2	01/04/2015 02/03/2015 01/04/2015	pH = 8.6 DO = 4.6	01/09/2014 02/06/2014		
6	Dameracherla	DO = 5.3 DO = 5.7	01/04/2015 01/05/2015	pH = 8.7 DO = 5.7 DO = 5.9 DO = 5.7	01/09/2014 02/06/2014 01/07/2014 01/08/2014	BOD = 3.8	02/02/2015
7	Halia	pH = 8.5 DO = 5.4 DO = 5.4	01/04/2015 01/04/2015 01/05/2015	pH = 8.7	01/09/2014		
8	Bawapuram	pH = 8.6 DO = 4.3 DO = 5.2	01/04/2015 01/04/2015 01/05/2015	pH = 8.8 DO = 5.9 DO = 5.5	01/10/2014 01/09/2014 01/10/2014	pH = 8.6 pH = 8.5 DO = 6.0	01/12/2014 01/01/2015 01/01/2015
9	Mantralayam	pH = 8.6 DO = 5.4 DO = 4.3 DO = 4.9	01/04/2015 02/03/2015 01/04/2015 01/05/2015	DO = 4.9 DO = 5.1 DO = 5.5 DO = 6.0	02/06/2014 11/07/2014 04/08/2014 01/10/2014	pH = 8.5 DO = 5.9	02/02/2015 01/01/2015
10	T.Ramapuram	BOD = 2.1 DO = 5.1 DO = 4.4 DO = 5.6	15/04/2015 11/03/2015 15/04/2015 01/05/2015	pH = 8.5 DO = 5.2 DO = 4.5	01/09/2014 09/07/2014 19/08/2014	DO = 5.9	02/02/2015
11	Haralahalli	DO = 5.2	01/05/2015	DO = 5.2 DO = 5.7	01/07/2014 01/09/2014	DO = 5.9	01/01/2015
12	Kuppelur			DO = 5.5	07/10/2014		
13	Honnali	BOD = 2.3 DO = 5.4 DO = 5.0	02/03/2015 02/03/2015 01/05/2015	DO = 5.7 DO = 5.7	01/07/2014 01/09/2014	DO = 4.0	07/11/2014

contd...

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

V Basin : Krishna							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
14	Simoga	DO = 4.6 DO = 3.5	02/03/2015 01/05/2015	DO = 5.4	01/07/2014	DO = 5.9 DO = 5.7 DO = 5.9	07/11/2014 01/01/2015 02/02/2015
15	Holehonnur	BOD = 3.3 DO = 4.0 DO = 5.4	02/03/2015 01/04/2015 01/05/2015	BOD = 2.9 DO = 5.4 DO = 3.8 DO = 5.6	01/06/2014 01/07/2014 01/08/2014 07/10/2014	DO = 6.0 DO = 6.0	01/01/2015 02/02/2015
16	Yadgir			BOD = 2.3 BOD = 2.5 BOD = 2.2	17/07/2014 12/08/2014 01/10/2014		
17	Malkhed	DO = 5.9 DO = 5.2 DO = 4.3	02/03/2015 01/04/2015 01/05/2015	DO = 5.3 DO = 5.8	02/06/2014 01/08/2014		
18	Phulgaon			BOD = 4.0	02/09/2014		
19	Huvinhedigi	pH = 8.5 DO = 4.0 DO = 5.1	01/04/2015 01/04/2015 01/05/2015	pH = 8.5 pH = 8.5 DO = 4.7	01/09/2014 01/10/2014 02/06/2014		
20	Cholachguda (Seasonal)			BOD = 3.6	07/10/2014		
21	Kurundwad			BOD = 4.5	07/10/2014		
22	Arjunwad			BOD = 2.0	07/10/2014		
23	Sandoli			BOD = 4.5	07/10/2014		
24	Karad			BOD = 2.4 BOD = 2.1	02/08/2014 02/09/2014		
25	Warunji			BOD = 3.0 BOD = 3.2	02/08/2014 02/09/2014		

Source: Water Quality Data Book (June 2014 to May 2015) Krishna Basin.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

VI Basin : Cauvery							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Annavaasal			BOD = 2.0	01/09/2014		
2	Nallathur					BOD = 2.0	01/12/2014
3	Menangudi			pH = 9.0	01/10/2014		
4	Peralam			pH = 8.5	01/10/2014		
5	Thengudi	DO = 4.5	02/03/2015	DO = 6.0 BOD = 2.2 DO = 4.4	30/08/2014 01/09/2014 01/10/2014	DO = 4.5 DO = 4.9 DO = 4.8	01/12/2014 01/01/2015 02/02/2015
6	Musiri	BOD = 3.4 BOD = 5.3	01/04/2015 01/05/2015	pH = 8.5 BOD = 6.4	01/08/2014 01/08/2014	BOD = 2.0	02/02/2015
7	Nallamarampatty					BOD = 3.5 BOD = 2.6	01/12/2014 02/02/2015
8	Elunuthimangalam	pH = 8.8 pH = 8.5 BOD = 5.3 BOD = 4.5 BOD = 5.1 DO = 5.6 DO = 5.6	02/03/2015 01/05/2015 02/03/2015 01/04/2015 01/05/2015 02/03/2015 01/04/2015	BOD = 5.5 DO = 5.8	01/10/2014 01/10/2014	pH = 8.7 BOD = 2.5 BOD = 4.3 DO = 5.6 DO = 5.6 DO = 5.8	02/02/2015 01/12/2014 02/02/2015 01/11/2014 01/12/2014 02/02/2015
9	Kodumudi	BOD = 2.8 BOD = 3.6 BOD = 3.4	02/03/2015 01/04/2015 01/05/2015	pH = 8.8 BOD = 4.4 BOD = 3.6	02/06/2014 02/06/2014 01/08/2014	BOD = 2.3	01/01/2015
10	Savandapur	BOD = 2.0	01/05/2015			DO = 5.6	01/01/2015
11	Gandhavayal					pH = 8.5	02/02/2015
12	Urachikottai	BOD = 3.2 BOD = 5.5	01/04/2015 01/05/2015	pH = 8.7 BOD = 3.0 BOD = 2.5	24/06/2014 01/08/2014 01/09/2014	BOD = 2.5 BOD = 2.5	11/12/2014 01/11/2014

contd...

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

VI Basin : Cauvery							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
13	Kudlur					pH = 8.5 pH = 9.0	01/12/2014 01/01/2015
14	Billigundulu	DO = 5.6 DO = 4.7 DO = 6.0	02/03/2015 01/04/2015 01/05/2015	BOD = 2.6 DO = 6.0 DO = 5.1	01/09/2014 02/06/2014 07/10/2014		
15	T.Bekuppe	BOD = 14.2 DO = 5.3 DO = 2.3 DO = 1.7	02/03/2015 02/03/2015 01/04/2015 01/05/2015	BOD = 13.0 BOD = 6.6 BOD = 15.1 BOD = 15.8 DO = 1.4 DO = 3.0 DO = 1.9 DO = 2.6 DO = 2.9	02/06/2014 01/07/2014 01/08/2014 01/09/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014	BOD = 7.7 BOD = 12.3 BOD = 11.6 DO = 3.9 DO = 2.7 DO = 2.9	01/12/2014 01/01/2015 02/02/2015 01/12/2014 01/01/2015 02/02/2015
16	T. K. Halli			DO = 2.7 DO = 3.0 DO = 4.5	02/06/2014 01/09/2014 07/10/2014	DO = 5.9 DO = 5.5 DO = 5.1 DO = 5.2	07/11/2014 01/12/2014 01/01/2015 02/02/2015
17	Kollegal	DO = 4.7 DO = 4.8	02/03/2015 01/04/2015	BOD = 2.4 BOD = 2.0 DO = 5.6 DO = 5.4 DO = 5.7 DO = 3.9	01/07/2014 01/08/2014 02/06/2014 01/08/2014 01/09/2014 07/10/2014	DO = 5.7	07/11/2014
18	T. Narasipur	BOD = 2.1 DO = 5.4 DO = 5.0 DO = 5.0	02/03/2015 02/03/2015 01/04/2015 01/05/2015	BOD = 3.2 DO = 4.7 DO = 5.0 DO = 5.8 DO = 5.1	01/09/2014 02/06/2014 01/07/2014 01/08/2014 07/10/2014	BOD = 2.3 BOD = 2.4 DO = 5.5 DO = 6.0	07/11/2014 01/12/2014 01/12/2014 01/01/2015
19	Muthankera	DO = 5.4	01/04/2015	BOD = 2.0 DO = 4.6 DO = 5.4	01/10/2014 02/06/2014 01/10/2014	DO = 5.6	01/12/2014
20	Akkihebbal	DO = 5.4 DO = 4.2	02/03/2015 01/04/2015	pH = 8.6 BOD = 3.8 DO = 5.4 DO = 3.9	01/07/2014 01/09/2014 01/08/2014 07/10/2014		
21	M.H.Halli	DO = 4.6 DO = 3.1	02/03/2015 01/05/2015	DO = 4.4	01/07/2014	DO = 5.1	01/01/2015
22	Sakaleshpur	DO = 4.7 DO = 4.5 DO = 5.8	02/03/2015 01/04/2015 01/05/2015	BOD = 2.3 BOD = 2.6 DO = 5.4 DO = 4.1 DO = 5.2 DO = 5.6	02/06/2014 01/09/2014 02/06/2014 01/08/2014 01/09/2014 07/10/2014	BOD = 2.5 BOD = 2.6	07/11/2014 01/12/2014
23	Kudige	DO = 5.6 DO = 5.4	02/03/2015 01/05/2015	DO = 5.9	01/07/2014		

Source: Water Quality Data Book (June 2014 to May 2015) Cauvery Basin.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

VII Basin : Pennar							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Nellore	DO = 5.1	06/04/2015	pH = 9.3 BOD = 2.0	20/10/2014 20/10/2014	BOD = 2.0 DO = 4.7	13/11/2014 13/11/2014
2	Nandipalli			BOD = 2.4 DO = 5.0	27/10/2014 27/10/2014	BOD = 2.2	01/11/2014
3	Chennur	BOD = 2.2	19/03/2015	BOD = 2.4 BOD = 2.9	02/06/2014 01/10/2014		
4	Alladupalli	DO = 5.9 DO = 6.0 DO = 6.0	19/03/2015 01/04/2015 01/05/2015	BOD = 2.2 BOD = 2.3 DO = 4.6 DO = 4.5	02/06/2014 01/10/2014 02/06/2014 01/07/2014	BOD = 2.7 DO = 5.8 DO = 4.7	01/11/2014 01/01/2015 02/02/2015

Source: Water Quality Data Book (June 2014 to May 2015) East Flowing Rivers from Mahanadi to Kanyakumari .

VIII Basin : East Flowing Rivers from Mahanadi to Pennar							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Marella	DO = 5.9	02/03/2015	pH = 8.6 DO = 5.8 DO = 5.3	01/09/2014 01/09/2014 01/10/2014	DO = 6.0	01/01/2015

Source: Water Quality Data Book (June 2014 to May 2015) East Flowing Rivers from Mahanadi to Kanyakumari .

IX Basin : East Flowing Rivers from Pennar to Kanyakumari							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Naidupeta					DO = 5.6	17/01/2015
2	Sulurpet					BOD = 2.2	15/12/2014
3	Vazhavachanur	pH = 8.6 BOD = 2.2 DO = 5.7 DO = 4.2 DO = 5.4	24/04/2015 24/04/2015 02/03/2015 24/04/2015 01/05/2015	BOD = 2.7	09/10/2014	DO = 6.0	01/12/2014
4	Gummanur	BOD = 3.7 BOD = 3.0 BOD = 3.0	02/03/2015 01/04/2015 01/05/2015	pH = 8.6 pH = 8.5 BOD = 4.6 BOD = 3.1 BOD = 5.0 BOD = 4.9	01/07/2014 01/08/2014 02/06/2014 01/08/2014 01/09/2014 01/10/2014	pH = 8.5 BOD = 4.6 BOD = 5.5 BOD = 4.6 BOD = 4.7	02/02/2015 01/11/2014 01/12/2014 01/01/2015 02/02/2015
5	Paramakudi					BOD = 3.9 DO = 5.1	01/12/2014 01/12/2014
6	Theni	BOD = 2.4 DO = 5.9	01/05/2015 01/04/2015	DO = 6.0	01/09/2014	pH = 8.6	02/02/2015
7	Ambasamudram	BOD = 2.9	14/05/2015			pH = 8.6	01/01/2015
8	Murappanadu	BOD = 2.4 DO = 5.6	01/04/2015 01/04/2015	BOD = 2.5 DO = 5.6 DO = 5.9 DO = 5.2	02/06/2014 02/06/2014 01/07/2014 01/08/2014	DO = 5.4 DO = 5.5 DO = 5.8	01/11/2014 01/12/2014 01/01/2015

Source: Water Quality Data Book (June 2014 to May 2015) East Flowing Rivers from Mahanadi to Kanyakumari .

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

X Basin : Narmada							
SLNo.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value (3)	Date (4)	Value (5)	Date (6)	Value (7)	Date (8)
1	Chandwada	BOD = 4.8	01/04/2015	DO = 6.0	01/08/2014	BOD = 2.1	02/02/2015
2	Garudeshwar	BOD = 4.9	01/04/2015				
3	Pati			DO = 5.8	01/09/2014		
4	Dhulsar			DO = 6.0 DO = 5.5 DO = 5.8	01/08/2014 01/09/2014 07/10/2014	DO = 5.5	01/11/2014
5	Mandleshwar	DO = 5.8	01/05/2015	BOD = 2.0 BOD = 2.5 DO = 5.1	02/06/2014 01/07/2014 02/06/2014		
6	Kogaon	BOD = 3.3 DO = 3.4	06/04/2015 06/04/2015	DO = 5.3	01/08/2014		
7	Handia	pH = 8.5	01/05/2015	pH = 8.5 DO = 5.6 DO = 5.9	01/07/2014 02/06/2014 01/08/2014		
8	Chhidgaon	pH = 8.5 DO = 5.9	01/05/2015 06/04/2015	DO = 5.9 DO = 5.7	02/06/2014 01/09/2014	DO = 6.0	01/11/2014
9	Hoshangabad			pH = 8.5 DO = 5.9 DO = 6.0 DO = 5.3	01/07/2014 02/06/2014 01/08/2014 01/09/2014		

contd...

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

X Basin : Narmada							
SLNo.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
10	Sandia			BOD = 2.3 DO = 5.8 DO = 5.8 DO = 5.6 DO = 5.3 DO = 5.7	01/07/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014		
11	Gadarwara			pH = 8.5 pH = 8.5 DO = 5.8 DO = 6.0 DO = 4.8 DO = 5.7	02/06/2014 01/07/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014		
12	Barman			BOD = 2.5 DO = 4.9 DO = 3.5 DO = 5.3 DO = 5.3	01/07/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014		
13	Belkheri	DO = 5.6 DO = 5.9	02/03/2015 01/05/2015	DO = 4.9 DO = 5.5 DO = 5.8 DO = 5.8	02/06/2014 01/07/2014 01/08/2014 01/09/2014		
14	Patan	DO = 4.6 DO = 5.7 DO = 5.5	02/03/2015 06/04/2015 01/05/2015	pH = 8.8 BOD = 2.1 BOD = 2.1 DO = 4.3 DO = 2.1 DO = 5.4 DO = 5.3	01/07/2014 01/07/2014 01/08/2014 02/06/2014 01/07/2014 01/09/2014 07/10/2014	DO = 5.7 DO = 5.9 DO = 5.8	01/11/2014 01/12/2014 02/02/2015
15	Bamni	DO = 5.2	06/04/2015	BOD = 2.3 DO = 4.4 DO = 6.0	01/07/2014 01/07/2014 01/09/2014		
16	Mohgoan	DO = 5.9 DO = 5.5	02/03/2015 01/05/2015	DO = 3.6 DO = 4.8 DO = 5.9	02/06/2014 01/07/2014 01/08/2014	DO = 6.0	01/12/2014
17	Manot	DO = 6.0	01/05/2015	BOD = 2.6 DO = 4.8 DO = 4.7 DO = 6.0	02/06/2014 02/06/2014 01/07/2014 01/08/2014		
18	Dindori	DO = 5.0 DO = 4.9	06/04/2015 01/05/2015	BOD = 2.4 DO = 3.0 DO = 4.0 DO = 5.2 DO = 5.7 DO = 5.7	01/07/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014		

Source: Water Quality Data Book (June 2014 to May 2015) Narmada Basin.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

XI Basin : Tapi							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Burhanpur	BOD = 4.8 BOD = 2.2	01/04/2015 01/05/2015	BOD = 2.0 BOD = 2.7 BOD = 2.6	01/07/2014 01/08/2014 01/10/2014	BOD = 3.5 BOD = 2.1 BOD = 2.8 BOD = 4.5	01/11/2014 01/12/2014 01/01/2015 02/02/2015
2	Gopalkheda	BOD = 3.8	01/04/2015	pH = 8.7	02/06/2014	BOD = 3.5	02/02/2015
3	Sarangkheda	BOD = 4.0	01/04/2015	pH = 8.6 BOD = 2.8	02/06/2014 02/06/2014	BOD = 3.0	02/02/2015
4	Pingalwada	BOD = 2.2 BOD = 2.4 DO = 0.5 DO = 0.8 DO = 4.2	01/04/2015 01/05/2015 02/03/2015 01/04/2015 01/05/2015	pH = 8.5 BOD = 3.2 BOD = 3.6 BOD = 2.9 DO = 1.5 DO = 1.6 DO = 1.5 DO = 3.0	02/06/2014 01/08/2014 01/09/2014 01/10/2014 02/06/2014 01/07/2014 01/09/2014 01/10/2014	BOD = 2.0 BOD = 3.0 DO = 2.5 DO = 0.5 DO = 0.8	01/11/2014 01/12/2014 01/11/2014 01/01/2015 02/02/2015
5	Motinaroli	BOD = 3.4 BOD = 2.0	01/04/2015 01/05/2015	pH = 8.7 BOD = 2.0 BOD = 3.3	02/06/2014 01/07/2014 01/09/2014	BOD = 4.9 BOD = 4.0	01/11/2014 02/02/2015

Source: Water Quality Data Book (June 2014 to May 2015) Tapi Basin.

XII Basin : West Flowing Rivers from Tapi to Tadri							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Badlapur	DO = 3.5 DO = 3.7 DO = 4.5	04/03/2014 07/04/2015 02/05/2015	DO = 6.0 DO = 5.0 DO = 5.2 DO = 4.8	03/06/2014 02/08/2014 02/09/2014 08/10/2014	BOD = 3.2 DO = 4.5 DO = 5.4 DO = 3.8	02/01/2015 11/11/2014 02/12/2014 03/02/2015
2	Mangaon (Seasonal)			BOD = 7.9	08/10/2014		
3	Mahuwa	BOD = 4.4 DO = 6.0	01/04/2015 01/04/2015			BOD = 2.2 DO = 6.0	02/02/2015 02/02/2015
4	Gadat	BOD = 4.7	01/04/2015	BOD = 2.8	02/06/2014		
5	Durvesh	BOD = 4.5 DO = 5.5	01/04/2015 01/04/2015	DO = 4.8 DO = 5.5	02/06/2014 01/10/2014	BOD = 3.8 DO = 5.5	02/02/2015 02/02/2015
6	Belne Bridge			BOD = 3.9	07/10/2014		

Source: Water Quality Data Book (June 2014 to May 2015) West Flowing Rivers from Kanyakumari to Tapi.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value (3)	Date (4)	Value (5)	Date (6)	Value (7)	Date (8)
1	Avershe					BOD = 2.1	07/11/2014
2	Erinjpuzha	BOD = 2.6	01/04/2015	pH = 6.1	01/08/2014		
3	Kuniyil			pH = 6.4 pH = 5.9 pH = 6.3	02/06/2014 01/08/2014 01/10/2014		
4	Karathodu					DO = 5.6	02/02/2015
5	Kumbidi			DO = 6.0	02/06/2014		
6	Mankara			DO = 4.8	02/06/2014		
7	Pudur	DO = 5.4	01/04/2015	BOD = 2.2 BOD = 2.2 DO = 5.0	02/06/2014 01/10/2014 02/06/2014		
8	Ambarampalayam			pH = 8.9 BOD = 6.6 DO = 5.7 DO = 5.4 DO = 5.6 DO = 5.5	01/10/2014 01/08/2014 02/06/2014 01/07/2014 01/08/2014 01/10/2014	BOD = 2.7	01/11/2014
9	Vandiperiyar	BOD = 3.0 DO = 5.2	01/04/2015 01/04/2015	BOD = 2.6 DO = 4.8	02/06/2014 02/06/2014	BOD = 2.0 DO = 4.2	02/02/2015 02/02/2015
10	Thumpamon					DO = 5.4	02/02/2015
11	Ayilam			pH = 6.4 DO = 6.0	01/08/2014 01/08/2014		

Source: Water Quality Data Book (June 2014 to May 2015) West Flowing Rivers from Kanyakumari to Tapi.

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

XIV Basin : Mahi							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Mataji	pH = 8.5 BOD = 3.3	01/04/2015 01/04/2015	BOD = 3.0 BOD = 2.1 DO = 5.4	02/06/2014 07/10/2014 01/08/2014		
2	Rangeli	pH = 8.7 BOD = 2.8	01/04/2015 01/04/2015	pH= 8.5 BOD = 3.8 BOD = 3.7 DO = 4.2 DO = 5.8 DO = 5.8	07/10/2014 02/06/2014 01/08/2014 02/06/2014 01/08/2014 07/10/2014	BOD = 3.0 BOD = 2.4	01/12/2014 02/02/2015
3	Paderdibadi	pH = 8.7 pH = 8.7 BOD = 3.6 BOD = 4.6 BOD = 6.0	01/04/2015 01/05/2015 02/03/2015 01/04/2015 01/05/2015	pH = 8.5 pH = 8.5 BOD = 2.7 BOD = 3.6 BOD = 2.1 BOD = 2.8 DO = 6.0 DO = 5.5 DO = 5.6	02/06/2014 07/10/2014 02/06/2014 01/07/2014 01/09/2014 07/10/2014 02/06/2014 01/07/2014 01/08/2014	pH = 8.5 pH = 8.7 BOD = 3.0 BOD = 2.0 BOD = 8.8 BOD = 7.6	01/11/2014 01/12/2014 01/11/2014 01/12/2014 01/01/2015 02/02/2015
4	Khanpur	pH = 8.6 pH = 8.6 pH = 8.9	02/03/2015 01/04/2015 01/05/2015	pH = 8.6 pH = 8.7 pH = 8.5 pH = 8.7 BOD = 2.3 DO = 5.8	02/06/2014 01/07/2014 01/09/2014 07/10/2014 07/10/2014 01/08/2014	pH = 8.6 pH = 8.5 BOD = 2.2 BOD = 4.1 BOD = 2.1	01/11/2014 01/12/2014 01/11/2014 01/12/2014 02/02/2015

Source: Water Quality Data Book (June 2014 to 2015) Mahi, Sabarmati & Other Basins .

XV Basin : Sabarmati							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Derol Bridge	pH = 8.5 DO = 5.2	01/04/2015 01/04/2015	DO = 4.8	07/10/2014	pH = 8.5	02/02/2015
2	Vautha	pH = 8.5 BOD = 39.0 BOD = 20.2 BOD = 27.6 DO = 0.01 DO = 0.01 DO = 0.01	01/05/2015 02/03/2015 01/04/2015 01/05/2015 02/03/2015 01/04/2015 01/05/2015	BOD = 24.0 BOD = 30.0 BOD = 4.5 BOD = 26.0 BOD = 6.0 DO = 0.01 DO = 0.10 DO = 3.80 DO = 0.01 Do = 0.80	02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014 02/06/2014 01/07/2014 01/08/2014 01/09/2014 07/10/2014	BOD = 9.3 BOD = 54.0 BOD = 48.0 BOD = 32.0 DO = 2.50 DO = 0.01 DO = 0.01 DO = 0.01	01/11/2014 01/12/2014 01/01/2015 02/02/2015 01/11/2014 01/12/2014 01/01/2015 02/02/2015

Source: Water Quality Data Book (June 2014 to 2015) Mahi, Sabarmati & Other Basins .

Table 12 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Class-A by Season during 2014-15

XVI Basin : WFR of Kutch, Saurashtra Including Luni							
Sl. No.	Site Name	Summer March to May		Monsoon June to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Abu Road			BOD = 3.2 DO = 4.7	07/10/2014 07/10/2014	BOD = 4.2	01/12/2014
2	Kamalpur			pH = 8.7 BOD = 2.3	07/10/2014 07/10/2014	pH = 8.5	01/12/2014
3	Chitrasani			pH = 8.5 BOD = 2.0 BOD = 2.3	01/08/2014 01/08/2014 07/10/2014		
4	Lowara	BOD = 3.9 DO = 4.0	01/04/2015 01/04/2015	BOD = 2.8 BOD = 3.3 BOD = 4.0 DO = 5.0	02/06/2014 01/08/2014 07/10/2014 02/06/2014	BOD = 6.6 BOD = 6.7	01/12/2014 02/02/2015
5	Ganod	pH = 8.6 DO = 5.4	01/04/2015 01/04/2015	pH = 8.5 pH = 8.8 BOD = 4.7 BOD = 2.6 DO = 5.1	01/08/2014 07/10/2014 01/06/2014 01/08/2014 01/06/2014	pH = 8.6 BOD = 2.4 BOD = 2.5	01/12/2014 01/12/2014 01/02/2015

Source: Water Quality Data Book (June 2014 to 2015) Mahi, Sabarmati & Other Basins .

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

I Basin : Mahanadi												
Sl. No.	Parameter	Site name River/Stream	Baronda Mahanadi	Rajim Mahanadi	Basantpur Mahanadi	Pathardih Kharun	Simga Seonath	Andhiyarkhore Hamp	Ghatora Arpa	Jondhra Seonath	Rampur Jonk	Manendragarh Hasdeo
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 1444.00	0.00 4058.00	9.13 19935.00	0.00 1284.00	0.00 9572.00	0.00 329.30	0.00 923.10	0.00 9676.00	0.00 812.40	0.00 279.20
2	Temperature (°C)	Min Max	15.00 27.50	21.50 29.00	18.50 31.00	27.00 33.40	18.00 31.00	18.00 31.00	19.50 32.00	21.00 30.00	14.00 30.00	13.00 31.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.20 8.30	7.30 8.70	7.60 8.90	7.50 8.10	7.50 8.60	7.90 8.70	7.30 8.40	7.60 8.40	7.50 8.50	7.30 8.70
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	1.50 4.00	2.10 4.60	3.70 25.10	5.00 22.10	3.90 19.60	2.50 13.10	3.30 15.10	3.90 6.10	1.10 4.80	1.90 10.90
6	Sodium (Na)	Min Max	10.10 19.80	10.80 18.50	10.00 40.90	12.20 19.30	14.30 63.20	17.90 87.40	11.70 102.80	13.40 34.70	10.50 21.90	11.80 33.60
7	Calcium (Ca)	Min Max	6.00 21.00	6.00 24.00	13.00 42.00	27.00 45.00	29.00 48.00	26.00 64.00	16.00 61.00	21.00 48.00	11.00 37.00	13.00 85.00
8	Magnesium (Mg)	Min Max	4.90 12.60	2.90 17.50	5.10 31.10	8.80 15.60	8.80 30.10	7.30 35.00	2.90 37.90	5.80 20.40	2.90 27.20	5.80 29.20
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	- -	- -	0.10 0.10	- -	0.10 0.10	0.10 0.10	0.10 0.10	- -	0.10 0.10	0.10 0.10
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 14.40	0.00 0.00	0.00 12.00	0.00 38.40	0.00 0.00	0.00 0.00	0.00 19.00	0.00 14.40
13	Bicarbonate (HCO ₃)	Min Max	54.00 88.00	44.00 105.00	90.00 161.00	102.00 171.00	122.00 205.00	183.00 278.00	139.00 322.00	68.00 215.00	76.00 185.00	61.00 195.00
14	Chloride (CL)	Min Max	9.00 15.00	10.00 18.00	8.00 31.00	16.00 42.00	16.00 67.00	15.00 55.00	9.00 60.00	11.00 28.00	10.00 20.00	10.00 42.00
15	Fluoride (F) (F)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
16	Sulphate (SO ₄)	Min Max	- -	- -	26.40 32.00	- -	23.00 23.00	35.00 36.60	15.00 17.00	- -	22.00 22.00	14.00 18.50
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	- -	- -	0.08 0.26	- -	0.21 0.21	0.11 0.15	0.08 0.08	- -	0.18 0.18	0.10 0.11
19	Nitrite (NO ₂ -N)	Min Max	- -	- -	0.02 0.06	- -	0.04 0.04	0.07 0.16	0.03 0.03	- -	0.03 0.03	0.02 0.08
20	Phosphate (PO ₄)	Min Max	- -	- -	0.05 0.08	- -	0.07 0.07	0.14 0.17	0.04 0.06	- -	0.04 0.04	0.01 0.02
21	Silica (SiO ₂)	Min Max	- -	- -	9.40 21.20	- -	17.80 17.80	10.00 17.10	9.20 9.30	- -	13.20 13.20	9.80 11.50

Source: Water Quality Year Book (Mahanadi Basin), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

I Basin : Mahanadi												
Sl. No.	Parameter	Site name	Baronda	Rajim	Basantpur	Pathardih	Singa	Andhiyarkhore	Ghatora	Jondhra	Rampur	Manendragarh
		River/Stream	Mahanadi	Mahanadi	Mahanadi	Kharun	Seonath	Hamp	Arpa	Seonath	Jonk	Hasdeo
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	DO (Dissolved Oxygen)	Min Max	6.00 9.80	5.60 8.9	5.60 8.70	0.70 4.10	3.40 8.60	5.00 9.50	5.20 8.50	5.20 9.80	5.70 8.70	4.20 9.50
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.20 1.70	0.20 2.60	0.10 1.90	0.70 4.10	0.10 1.80	0.20 2.80	0.60 5.40	0.40 2.70	0.30 1.70	0.10 21.00
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	36.00 105.00	56.00 117.00	73.00 210.00	109.00 177.00	113.00 209.00	132.00 234.00	84.00 266.00	76.00 205.00	56.00 202.00	56.00 334.00
40	Na % (Sodium Percentage)	Min Max	22.00 46.00	22.00 41.00	12.00 38.00	13.00 25.00	14.00 47.00	19.00 43.00	12.00 50.00	15.00 29.00	13.00 36.00	8.00 35.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.50 1.20	0.50 1.10	0.40 1.70	0.40 0.70	0.40 2.30	0.60 2.50	0.40 3.10	0.50 1.10	0.40 1.00	0.30 1.20
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.40	0.00 0.40	0.00 0.50	0.00 0.20	0.00 0.60	0.00 1.90	0.00 1.20	0.00 0.00	0.00 0.80	0.00 0.00

Source: Water Quality Year Book (Mahanadi Basin), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

I Basin : Mahanadi									
Sl. No.	Parameter	Site name	Bamnidhi	Kurubhata	Sundergarh	Salebhata	Kesinga	Kantamal	Tikarapara
		River/Stream	Hasdeo	Mand	Ib	Ong	Tel	Tel	Mahanadi
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	4.28 7392.00	0.18 1337.00	0.16 1828.00	0.04 7441.00	23.59 7402.00	32.08 7778.00	190.00 29800.00
2	Temperature (°C)	Min Max	15.00 29.00	19.60 31.50	16.00 29.00	17.50 33.10	20.00 30.00	17.00 30.50	21.00 30.50
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.10 8.90	7.70 8.90	7.40 8.60	7.60 8.70	7.90 8.90	7.70 8.70	7.50 8.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	3.60 10.70	1.20 12.10	0.40 9.40	0.70 7.30	0.10 11.90	0.30 10.20	1.20 3.40
6	Sodium (Na)	Min Max	10.60 22.10	10.40 20.60	11.10 33.60	12.30 51.20	10.20 37.90	10.00 29.40	4.70 15.00
7	Calcium (Ca)	Min Max	11.00 34.00	10.00 26.00	8.00 26.00	18.00 51.00	14.00 30.00	13.00 31.00	14.00 35.00
8	Magnesium (Mg)	Min Max	3.90 18.50	3.90 14.60	2.90 16.50	2.90 19.40	4.90 20.40	3.90 16.50	1.90 9.70
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.10 0.10	0.10 0.10	0.10 0.10	0.10 0.10	0.10 0.10	0.10 0.10	0.30 0.50
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	0.00 0.00
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 14.40	0.00 16.80	0.00 28.80	0.00 19.20	0.00 14.40	0.00 0.00
13	Bicarbonate (HCO ₃)	Min Max	61.00 224.00	52.00 100.00	56.00 112.00	44.00 220.00	83.00 159.00	73.00 193.00	79.00 104.00
14	Chloride (CL)	Min Max	7.00 21.00	6.00 20.00	6.00 20.00	12.00 26.00	4.00 17.00	5.00 22.00	9.40 20.70
15	Fluoride (F) (F)	Min Max	- -	- -	- -	- -	- -	- -	0.05 0.05
16	Sulphate (SO ₄)	Min Max	21.00 32.00	13.80 17.00	15.50 21.00	21.50 28.50	11.00 13.50	13.50 21.50	10.60 17.20
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.16 0.75	0.10 0.70	0.10 0.40	0.10 0.25	0.11 0.12	0.10 0.13	0.84 1.33
19	Nitrite (NO ₂ -N)	Min Max	0.02 0.06	0.01 0.05	0.02 0.07	0.04 0.08	0.04 0.09	0.02 0.08	0.00 0.04
20	Phosphate (PO ₄)	Min Max	0.04 0.08	0.04 0.10	0.03 0.05	0.03 0.07	0.03 0.08	0.05 0.07	0.00 0.00
21	Silica (SiO ₂)	Min Max	12.60 18.60	9.00 15.00	9.50 10.00	10.20 17.50	10.00 12.00	9.80 16.50	8.00 12.00

Source: Water Quality Year Book (Mahanadi Basin), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

I Basin : Mahanadi									
Sl. No.	Parameter	Site name River/Stream	Bamnidhi Hasdeo	Kurubhata Mand	Sundergarh Ib	Salebhata Ong	Kesinga Tel	Kantamal Tel	Tikarapara Mahanadi
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
22	DO (Dissolved Oxygen)	Min Max	3.20 9.10	6.40 8.60	5.90 8.60	5.30 9.30	6.40 9.30	4.70 9.20	5.20 10.90
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.10 3.20	0.10 1.70	0.10 1.30	0.10 2.30	0.10 1.70	0.10 1.10	0.20 0.80
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- --
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	0.00 0.00
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	44.00 157.00	44.00 109.00	36.00 109.00	76.00 181.00	64.00 153.00	56.00 130.00	56.00 95.00
40	Na % (Sodium Percentage)	Min Max	15.00 42.00	20.00 39.00	18.00 46.00	17.00 46.00	13.00 39.00	14.00 49.00	14.00 35.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.40 1.10	0.50 1.00	0.50 1.60	0.60 2.00	0.40 1.50	0.40 1.50	0.30 0.80
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 1.20	0.00 0.00	0.00 0.40	0.00 1.40	0.00 0.70	0.00 0.70	0.00 0.50

Source: Water Quality Year Book (Mahanadi Basin), 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.
2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

II Basin : Subarnarekha										
Sl. No.	Parameter	Site name	Muri	Adityapur	Jamshedpur	Ghatshila	Ghatsila Road Bridge	Baridhi Nala	Kulpatanga	Govindpur
		River/Stream	Subarnarekha	Kharkhai	Subarnarekha	Subarnarekha	Subarnarekha	Baridhi Nala	Kharkhal	Burhabalang
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
2	Temperature (°C)	Min Max	16.00 30.00	17.50 31.00	18.00 31.50	15.00 31.00	15.00 31.00	19.00 31.00	17.50 31.00	22.00 32.50
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.10 8.60	7.50 8.80	7.20 8.20	7.10 7.90	7.00 8.00	7.30 8.10	7.90 8.30	7.00 8.10
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	1.00 5.20	0.70 5.70	1.00 3.60	1.70 31.00	1.20 8.30	3.40 37.20	0.60 5.80	1.10 1.80
6	Sodium (Na)	Min Max	2.70 58.10	6.10 33.80	6.10 28.30	6.60 45.30	6.20 25.60	27.10 51.60	3.50 30.60	3.10 22.60
7	Calcium (Ca)	Min Max	16.00 40.00	18.00 58.00	13.00 55.00	13.00 37.00	16.00 35.00	4.00 72.00	21.00 36.00	18.00 31.00
8	Magnesium (Mg)	Min Max	2.90 17.60	1.00 23.30	2.90 18.50	2.80 17.50	2.90 15.60	2.90 36.00	6.80 23.30	4.90 13.60
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.10 0.50	0.10 0.70	0.10 0.60	0.20 3.90	0.20 3.90	0.10 1.30	0.10 0.40	0.30 0.80
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
13	Bicarbonate (HCO ₃)	Min Max	20.00 124.00	39.00 158.00	24.00 231.00	23.00 118.00	66.00 106.00	49.00 233.00	29.00 261.00	56.00 131.00
14	Chloride (CL)	Min Max	9.70 64.10	13.20 37.70	11.70 81.10	11.30 60.30	17.00 54.40	13.20 105.60	11.30 39.60	9.40 35.00
15	Fluoride (F) (F)	Min Max	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05
16	Sulphate (SO ₄)	Min Max	3.20 40.80	35.20 48.30	3.30 146.70	7.80 49.80	12.10 31.80	10.20 151.00	30.00 36.80	3.70 24.50
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.77 1.60	0.69 2.45	0.32 1.67	0.49 1.57	0.49 1.57	0.17 2.59	0.73 1.22	0.95 1.28
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.04	0.00 0.04	0.00 0.07	0.00 0.07	0.00 0.08	0.00 0.14	0.00 0.25	0.00 0.01
20	Phosphate (PO ₄)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
21	Silica (SiO ₂)	Min Max	3.00 9.00	4.50 9.00	3.00 8.00	3.00 9.00	4.00 8.00	3.00 9.00	6.00 9.00	5.00 8.00

Source: Water Quality Year Book (Subarnarekha , Burhabalang & Baitarani Basin), 2014-15

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

II Basin : Subarnarekha										
Sl. No.	Parameter	Site name	Muri	Adityapur	Jamshedpur	Ghatshila	Ghatsila Road Bridge	Baridhi Nala	Kulpatanga	Govindpur
(1)	(2)	River/Stream	Subarnarekha	Kharkhai	Subarnarekha	Subarnarekha	Subarnarekha	Baridhi Nala	Kharkhal	Burhabalang
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
22	DO (Dissolved Oxygen)	Min Max	4.00 11.70	0.60 9.90	3.60 7.90	4.60 10.90	5.00 10.90	0.10 7.20	4.60 11.50	- -
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.40 1.20	0.20 60.00	0.20 40.00	0.20 2.00	0.20 2.60	1.40 99.00	0.20 2.20	- -
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	60.00 173.00	48.00 243.00	60.00 209.00	60.00 145.00	65.00 142.00	87.00 330.00	84.00 187.00	80.00 109.00
40	Na % (Sodium Percentage)	Min Max	3.00 60.00	15.00 36.00	13.00 30.00	14.00 36.00	13.00 34.00	15.00 48.00	5.00 32.00	6.00 31.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.10 2.80	0.30 1.30	0.30 1.00	0.30 1.70	0.30 1.10	0.70 2.40	0.10 1.10	0.10 0.90
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.30	0.00 0.80	0.00 0.20	0.00 0.10	0.00 0.10	0.0 2.10	0.00 1.60	0.00 0.20

Source: Water Quality Year Book (Subarnarekha & Burhabalang Basin), 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

III Basin : Brahmani & Baitarani													
Sl. No.	Parameter	Site name	Tilga	Jaraikela	Panposh	Gomlai	Jenapur	Talcher	Champua	Kamalanga	Anandpur	Nandira	RSP Nalla
		River/Stream	Sankh	Koel	Brahmani	Brahmani	Brahmani	Brahmani	Baitarani	Brahmani	Baitarani	Nandiranala	RSP Nala
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2	Temperature (°C)	Min Max	17.00 31.00	20.00 30.50	17.00 30.00	17.00 30.00	20.80 30.50	19.00 32.00	18.50 29.50	18.00 31.00	18.00 31.00	18.00 31.00	18.00 32.00
3	pH, GEN (Negative logarithm of hydrogen iron concentration)	Min Max	7.20 7.90	7.60 8.00	7.20 8.00	7.60 8.30	7.60 8.10	7.70 8.20	7.20 7.70	7.50 8.40	7.30 8.20	7.30 8.40	7.20 7.90
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.90 1.40	0.90 2.10	1.00 2.70	0.90 3.50	1.00 1.90	1.10 3.90	1.10 5.20	1.20 2.90	0.40 3.60	1.20 3.60	2.00 10.00
6	Sodium (Na)	Min Max	1.80 5.10	3.50 6.80	3.40 7.40	2.90 12.10	2.50 6.60	2.10 17.20	2.70 15.30	3.50 10.20	2.60 16.10	6.20 15.30	8.30 24.60
7	Calcium (Ca)	Min Max	5.00 96.00	13.00 96.00	13.00 24.00	8.00 19.00	8.00 26.00	11.00 96.00	10.00 22.00	21.00 28.00	8.00 27.00	19.00 28.00	22.00 45.00
8	Magnesium (Mg)	Min Max	1.00 11.70	4.90 10.70	1.00 12.30	1.90 11.70	3.90 9.70	1.00 43.60	2.90 11.70	2.90 11.70	2.90 14.60	4.90 12.60	3.90 20.40
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.10 0.40	0.10 0.70	0.10 0.40	0.10 0.50	0.10 1.30	0.10 0.90	0.30 0.80	0.10 0.40	0.10 1.50	0.10 0.50	0.10 0.80
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
13	Bicarbonate (HCO ₃)	Min Max	34.00 90.00	39.00 101.00	24.00 120.00	23.00 90.00	29.00 90.00	17.00 73.00	53.00 105.00	56.00 89.00	20.00 169.00	73.00 85.00	90.00 139.00
14	Chloride (CL)	Min Max	8.60 23.50	11.30 20.70	9.70 37.70	7.50 30.20	9.40 43.40	7.50 32.90	9.40 32.10	11.30 35.80	9.40 32.10	9.70 58.50	5.70 60.40
15	Fluoride (F) (F)	Min Max	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05	0.05 0.05
16	Sulphate (SO ₄)	Min Max	1.60 5.90	1.10 4.60	1.00 16.80	3.80 33.50	2.50 18.70	2.90 17.40	1.10 16.80	20.60 27.00	1.40 28.90	26.80 37.10	34.40 49.60
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.63 0.99	0.49 0.97	0.56 1.82	0.39 2.52	0.17 2.03	0.67 1.75	0.78 1.09	0.55 2.38	0.74 1.42	1.09 3.43	0.95 1.65
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.08	0.00 0.06	0.00 0.17	0.00 0.08	0.00 0.03	0.00 0.04	0.00 0.03	0.00 0.08	0.00 0.03	0.00 0.03	0.00 0.04
20	Phosphate (PO ₄)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	2.50 18.70	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
21	Silica (SiO ₂)	Min Max	3.00 7.50	3.00 6.00	4.50 9.00	3.00 9.00	4.00 21.00	2.00 9.00	3.00 8.00	8.00 9.50	2.50 9.00	5.00 6.50	5.00 7.00

Source: Water Quality Year Book (Brahmani & Baitarani Basin) 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

III Basin : Brahmani & Baitarani													
Sl. No.	Parameter	Site name	Tilga	Jaraikela	Panposh	Gomlai	Jenapur	Talcher	Champua	Kamalanga	Anandpur	Nandira	RSP Nalla
(1)	(2)	River/Stream	Sankh	Koel	Brahmani	Brahmani	Brahmani	Brahmani	Baitarani	Brahmani	Baitarani	Nandiranala	RSP Nala
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
22	DO (Dissolved Oxygen)	Min Max	6.00 13.50	5.80 12.30	3.00 11.10	4.80 11.30	5.60 11.50	6.20 12.10	- -	0.80 10.90	2.80 11.70	5.80 10.70	2.00 9.70
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.20 0.60	0.20 1.80	0.20 1.80	0.20 2.60	0.20 1.80	0.20 32.00	- -	0.20 1.40	0.20 1.80	0.20 2.00	0.20 19.90
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zoonlankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.01	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	16.00 253.00	56.00 285.00	44.00 101.00	28.00 97.00	40.00 101.00	32.00 285.00	40.00 101.00	76.00 105.00	32.00 109.00	79.00 113.00	92.00 181.00
40	Na % (Sodium Percentage)	Min Max	2.00 33.00	3.00 15.00	12.00 18.00	9.00 23.00	11.00 19.00	2.00 17.00	6.00 36.00	7.00 19.00	8.00 29.00	12.00 25.00	14.00 25.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.10 0.40	0.10 0.30	0.20 0.40	0.20 0.50	0.20 0.40	0.10 0.40	0.10 0.90	0.10 0.50	0.20 0.80	0.30 0.70	0.40 0.80
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.20	0.00 0.10	0.00 1.10	0.00 0.40	0.00 0.20	0.00 0.00	0.00 0.20	0.00 0.00	0.00 1.80	0.00 0.00	0.00 0.30

Source: Water Quality Year Book (Brahmani & Baitarani Basin) 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IV Basin: Godavari												
Sl. No.	Parameter	Site name	Polavaram	Bhadrachalam	Konta	Sangam	Perur	Pathagudem	Jagdalpur	Nowrangpur	Tekra	Bhatapalli
		River/Stream	Godavari	Godavari	Sabari	Murredu	Godavari	Indravati	Indravathi	Indravathi	Pranhita	Peddavagu
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	154.80 34000.00	18.03 39656.00	119.40 9768.00	0.00 130.60	28.23 44940.00	2.58 23065.00	0.00 1149.00	1.42 908.10	9.44 12273.00	2.32 1536.00
2	Temperature (°C)	Min Max	23.00 33.00	25.00 32.00	19.00 31.00	23.00 30.00	21.00 32.00	17.00 29.00	17.50 28.00	18.00 29.00	23.40 28.20	19.00 29.00
3	pH, GEN (Negative logarithm of hydrogen iron concentration)	Min Max	7.50 8.20	7.40 8.40	7.40 8.00	7.90 8.40	7.20 8.30	7.10 7.90	7.40 7.80	6.00 8.10	7.50 8.50	7.60 8.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	1.20 3.10	1.40 4.50	0.90 2.90	4.40 6.60	1.00 4.10	0.80 2.90	1.20 3.80	1.00 3.50	1.70 3.90	1.60 2.80
6	Sodium (Na)	Min Max	8.80 23.30	8.40 321.50	5.40 10.00	28.50 48.90	6.50 54.00	6.00 16.30	7.10 14.50	5.10 12.30	20.20 53.10	29.10 60.00
7	Calcium (Ca)	Min Max	11.00 20.00	13.00 121.00	7.00 20.00	27.00 44.00	6.00 41.00	9.00 20.00	10.00 36.00	9.00 14.00	25.00 45.00	26.00 40.00
8	Magnesium (Mg)	Min Max	5.80 10.90	6.80 72.40	3.40 10.20	14.50 24.80	2.90 17.00	4.40 10.20	4.40 13.60	4.40 6.60	7.30 25.90	20.30 35.80
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.20	0.00 0.30	0.00 0.30	0.00 0.40	0.00 0.20	0.00 1.00	0.10 1.10	0.00 1.20	0.00 0.30	0.00 0.20
11	Ammonia (NH ₃ -N)	Min Max	0.01 0.23	0.01 0.72	0.01 0.18	0.01 0.18	0.01 0.19	0.01 0.22	0.01 0.11	0.01 0.23	0.00 0.50	0.00 0.91
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 4.20	0.00 0.00	0.00 5.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 10.20	0.00 9.90
13	Bicarbonate (HCO ₃)	Min Max	62.00 117.00	51.00 772.00	30.00 97.00	152.00 237.00	26.00 224.00	44.00 109.00	44.00 224.00	37.00 101.00	149.00 247.00	201.00 344.00
14	Chloride (CL)	Min Max	2.00 37.10	1.00 118.00	0.50 5.40	22.70 39.70	0.50 31.70	0.00 5.90	0.00 23.30	1.70 15.20	8.10 33.70	8.80 25.10
15	Fluoride (F) (F)	Min Max	0.00 0.36	0.02 0.86	0.00 0.23	0.08 1.48	0.00 0.77	0.00 0.36	0.00 0.18	0.00 0.24	0.01 0.97	0.03 1.16
16	Sulphate (SO ₄)	Min Max	6.20 19.80	7.00 53.80	3.00 17.60	34.70 66.20	11.60 58.00	1.60 25.40	1.90 24.30	0.20 26.70	1.60 45.80	1.60 32.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.00 0.72	0.00 2.50	0.00 0.87	0.14 1.28	0.02 0.47	0.00 0.71	0.21 2.61	0.00 2.63	0.39 9.20	0.76 15.58
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.08	0.00 0.06	0.00 0.06	0.00 0.07	0.00 0.08	0.00 0.07	0.00 0.02	0.00 0.10	0.00 0.01	0.00 0.31
20	Phosphate (PO ₄)	Min Max	0.05 0.46	0.03 0.46	0.02 0.52	0.07 0.50	0.04 0.21	0.05 0.43	0.07 0.41	0.03 0.43	0.06 0.38	0.08 0.28
21	Silica (SiO ₂)	Min Max	10.30 17.50	12.80 27.90	9.50 16.20	10.20 19.90	8.90 22.30	13.40 22.20	11.10 21.20	16.20 22.10	4.70 45.40	8.60 79.80

Source: Water Quality Year Book (Godavari Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IV Basin Godavari												
Sl. No.	Parameter	Site name River/Stream	Polavaram Godavari	Bhadrachalam Godavari	Konta Sabari	Sangam Murredu	Perur Godavari	Pathagudem Indravati	Jagdalpur Indravathi	Nowrangpur Indravathi	Tekra Pranhita	Bhatapalli Peddavagu
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	DO (Dissolved Oxygen)	Min Max	5.50 7.80	5.20 8.90	5.30 8.70	5.60 8.00	5.40 8.10	5.50 8.30	6.10 8.30	4.50 7.90	5.10 7.50	5.70 8.70
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.20 2.30	0.30 1.40	0.30 1.20	0.30 1.70	0.20 1.70	0.10 1.70	0.70 1.70	0.20 1.70	1.00 45.00	1.10 3.70
24	Total Coliform (No. per 100 ml)	Min Max	130.00 16000.00	80.00 16000.00	40.00 16000.00	130.00 16000.00	2.00 16000.00	40.00 16000.00	300.00 16000.00	130.00 16000.00	40.00 1400.00	40.00 16000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	2.00 160000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	80.00 16000.00	2.00 16000.00	2.00 700.00	20.00 2800.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	0.20 0.20	0.60 0.60	0.10 0.10	7.20 7.20	0.50 0.50	0.10 0.10	- -	0.20 0.20	0.80 0.80	1.20 1.20
30	Boron (ppm) (B)	Min Max	0.00 0.50	0.00 0.39	0.00 0.39	0.00 0.48	0.00 0.44	0.00 0.35	0.00 0.40	0.00 0.42	0.06 0.95	0.05 0.95
31	Cadmium (Cd)	Min Max	0.00 1.00	0.40 1.00	0.10 1.00	0.40 3.00	0.00 1.00	0.00 1.00	0.00 0.00	0.00 0.40	0.30 1.00	0.20 1.00
32	Chromium (Cr)	Min Max	0.00 2.10	0.00 21.50	0.00 0.40	0.00 0.90	0.00 1.50	0.00 3.40	2.50 2.50	0.00 1.80	0.60 5.90	4.60 5.70
33	Copper (Cu)	Min Max	1.50 1.50	2.00 2.00	1.70 1.70	1.60 1.60	1.40 1.40	2.00 2.00	1.50 1.50	1.60 1.60	6.00 6.00	9.90 9.90
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	1.40 3.00	12.00 16.70	2.00 5.00	2.60 19.00	2.10 6.00	1.30 9.00	19.40 19.40	2.80 7.80	0.80 14.00	0.70 13.00
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	0.10 0.10	0.20 0.20	0.10 0.10	0.10 0.10	0.10 0.10	0.00 0.00	- -	0.00 0.00	0.00 0.00	0.00 0.00
38	Zinc (Zn)	Min Max	4.00 7.00	25.00 27.00	6.00 16.00	5.0 19.00	3.00 6.00	2.00 13.00	4.00 4.00	4.00 7.80	6.00 28.00	0.00 3.00
39	Total Hardness (HAR _ Total)	Min Max	52.00 88.00	62.00 604.00	34.00 94.00	127.00 213.00	28.00 161.00	41.00 91.00	42.00 148.00	40.00 63.00	113.00 195.00	183.00 239.00
40	Na % (Sodium Percentage)	Min Max	26.00 41.00	22.00 54.00	15.00 30.00	28.00 43.00	23.00 42.00	18.00 30.00	12.00 40.00	19.00 31.00	22.00 50.00	26.00 40.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.50 1.20	0.50 5.70	0.30 0.60	1.10 1.80	0.50 1.90	0.30 0.70	0.30 1.00	0.30 0.70	0.80 2.20	0.90 1.80
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.40	0.00 0.70	0.00 0.50	0.00 0.50	0.00 0.50	0.00 0.20	0.00 0.70	0.00 0.70	0.00 1.10	0.00 1.50

Source: Water Quality Year Book (Godavari Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IV Basin Godavari												
Sl. No.	Parameter	Site name	Bamni	P.G.Bridge	Nandgaon	Hivra	Asthi	Pauni	Satrapur	Rajegaon	Kumhari	Sakmur
		River/Stream	Wardha	Penganga	Wunna	Wardha	Wainganga	Wainganga	Kanhan	Bagh	Wainganga	Wardha
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	1.09 8758.00	0.00 2607.00	0.00 1137.00	0.00 2740.00	1.85 16908.00	- -	0.63 2615.00	0.00 9682.00	0.41 1969.00	1.15 7780.00
2	Temperature (°C)	Min Max	19.00 32.00	19.50 30.50	21.00 35.00	24.00 31.00	21.50 32.00	21.00 31.00	17.50 29.50	19.00 33.50	13.00 30.00	25.00 30.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.20 8.30	7.50 8.50	7.70 8.30	7.70 8.40	7.30 8.70	7.40 8.60	7.10 8.20	6.70 8.00	6.30 8.10	7.20 8.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	2.20 14.00	1.90 3.50	1.40 5.20	1.70 7.00	1.30 3.20	1.50 4.30	1.80 7.50	1.30 3.60	0.90 2.20	2.10 9.30
6	Sodium (Na)	Min Max	17.50 194.50	14.60 48.30	20.40 74.10	21.80 152.00	14.30 35.00	16.60 37.30	18.20 86.90	9.80 16.90	9.40 24.70	21.40 117.00
7	Calcium (Ca)	Min Max	33.00 61.00	20.00 55.00	26.00 56.00	23.00 41.00	21.00 35.00	29.00 38.00	41.00 60.00	18.00 38.00	18.00 50.00	25.00 52.00
8	Magnesium (Mg)	Min Max	13.90 43.20	8.40 33.50	2.40 39.40	10.70 42.60	4.80 36.20	3.20 21.60	8.40 29.70	1.60 19.00	4.80 24.80	9.10 39.90
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.20	0.00 0.30	0.00 0.20	0.00 0.20	0.00 0.60	0.00 0.21	0.00 0.40	0.00 0.60	0.00 0.10	0.00 0.20
11	Ammonia (NH ₃ -N)	Min Max	0.02 0.60	0.00 0.77	0.00 0.50	0.00 0.70	0.04 1.16	0.00 0.77	0.00 0.46	0.03 0.58	0.04 0.89	0.02 0.73
12	Carbonate (CO ₃)	Min Max	0.00 8.20	0.00 12.20	0.00 10.20	0.00 10.20	0.00 6.10	0.00 8.20	0.00 0.00	0.00 0.00	0.00 0.00	0.00 9.90
13	Bicarbonate (HCO ₃)	Min Max	155.00 424.00	148.00 309.00	121.00 297.00	145.00 484.00	94.00 217.00	110.00 211.00	163.00 340.00	70.00 183.00	60.00 264.00	164.00 359.00
14	Chloride (CL)	Min Max	11.00 120.00	4.40 40.90	13.20 74.60	11.70 40.90	2.90 21.90	10.30 24.90	5.90 84.90	4.30 11.80	2.90 29.30	11.00 81.90
15	Fluoride (F) (F)	Min Max	0.04 1.13	0.06 1.16	0.11 0.69	0.07 0.95	0.07 1.36	0.05 1.05	0.06 0.73	0.04 0.79	0.06 0.59	0.10 1.63
16	Sulphate (SO ₄)	Min Max	3.70 129.50	4.70 30.00	6.80 22.60	6.60 39.00	6.40 21.30	6.30 27.00	12.50 72.30	6.90 25.40	5.80 19.80	3.00 69.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.87 15.23	0.54 15.42	0.30 9.42	0.66 12.72	0.05 7.06	0.11 7.48	0.34 21.04	0.02 7.46	0.15 8.77	0.47 14.06
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.09	0.00 0.05	0.00 0.02	0.00 0.04	0.00 0.03	0.00 0.01	0.00 0.04	0.00 0.04	0.00 0.02	0.00 0.01
20	Phosphate (PO ₄)	Min Max	0.08 0.30	0.06 0.39	0.07 0.37	0.04 0.35	0.04 0.38	0.07 0.27	0.05 0.24	0.05 0.27	0.03 0.22	0.03 0.33
21	Silica (SiO ₂)	Min Max	6.20 42.60	8.30 61.20	6.70 48.90	8.00 48.10	4.00 28.90	4.10 35.00	8.60 57.40	5.50 53.40	6.70 44.20	5.90 51.60

Source: Water Quality Year Book (Godavari Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IV Basin Godavari												
Sl. No.	Parameter	Site name River/Stream	Bamni Wardha	P.G.Bridge Penganga	Nandgaon Wunna	Hivra Wardha	Asthi Wainganga	Pauni Wainganga	Satrapur Kanhana	Rajegaon Bagh	Kumhari Wainganga	Sakmur Wardha
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
22	DO (Dissolved Oxygen)	Min Max	3.00 7.80	5.70 8.80	5.40 8.50	5.10 8.70	5.60 7.90	4.90 9.50	5.80 10.00	5.60 8.00	5.50 8.60	4.20 8.40
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.80 225.00	1.70 4.00	1.00 7.00	1.20 25.00	0.80 3.70	1.20 4.80	1.20 4.00	1.00 3.80	0.80 3.90	1.10 15.00
24	Total Coliform (No. per 100 ml)	Min Max	80.00 9000.00	40.00 1700.00	40.00 9000.00	20.00 2800.00	40.00 3000.00	40.00 5000.00	40.00 3300.00	20.00 1300.00	2.00 5000.00	40.00 5000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	20.00 9000.00	20.00 800.00	20.00 1700.00	20.00 1300.00	20.00 1700.00	20.00 1300.00	20.00 800.00	20.00 800.00	2.00 1300.00	20.00 2200.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	1.30 1.30	0.00 0.00	0.00 0.00	0.00 0.00	1.30 1.30	6.60 6.60	4.00 4.00	1.30 1.30	0.90 0.90	0.90 0.90
30	Boron (ppm) (B)	Min Max	0.05 0.50	0.05 0.86	0.05 0.94	0.06 0.97	0.05 0.98	0.05 0.75	0.05 0.96	0.07 0.84	0.05 0.51	0.08 1.16
31	Cadmium (Cd)	Min Max	0.60 1.00	1.00 1.20	0.90 1.00	0.50 1.00	0.70 1.00	0.00 1.00	0.00 2.00	0.30 1.00	0.00 1.00	0.30 1.00
32	Chromium (Cr)	Min Max	2.00 6.30	0.00 1.10	0.00 2.60	0.00 3.70	0.00 2.40	0.00 2.10	0.00 3.00	0.00 2.60	0.00 2.70	3.90 6.00
33	Copper (Cu)	Min Max	6.00 6.00	3.50 3.50	4.10 4.10	6.30 6.30	7.40 7.40	3.20 3.20	3.50 3.50	4.00 4.00	3.40 3.40	7.20 7.20
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	1.20 15.00	0.80 6.00	0.80 13.00	1.10 14.00	4.50 11.00	0.90 14.00	1.50 19.00	0.80 1.00	0.90 12.00	1.00 15.00
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	0.00 0.00	0.10 0.10	0.00 0.00	0.10 0.10	0.10 0.10	0.90 0.90	0.10 0.10	0.10 0.10	0.20 0.20	0.00 0.00
38	Zinc (Zn)	Min Max	0.00 5.00	4.00 5.00	0.00 3.00	5.00 19.00	4.00 6.00	3.00 15.00	3.00 7.00	4.00 17.00	0.00 5.00	4.00 22.00
39	Total Hardness (HAR _ Total)	Min Max	140.00 300.00	119.00 219.00	93.00 251.00	121.00 235.00	75.00 208.00	101.00 169.00	139.00 246.00	70.00 167.00	81.00 215.00	130.00 278.00
40	Na % (Sodium Percentage)	Min Max	21.00 58.00	21.00 37.00	18.00 50.00	23.00 58.00	21.00 36.00	19.00 35.00	22.00 51.00	11.00 32.00	14.00 26.00	26.00 48.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.60 5.00	0.60 1.60	0.60 2.40	0.80 4.30	0.60 1.30	0.60 1.30	0.70 2.90	0.30 0.80	0.40 0.80	0.80 3.10
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 2.70	0.00 1.30	0.00 0.80	0.00 3.30	0.00 0.50	0.00 1.00	0.00 2.20	0.00 0.80	0.00 0.90	0.00 1.30

Source: Water Quality Year Book (Godavari Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IV Basin Godavari									
Sl. No.	Parameter	Site name	Wairagarh	Ramakona	Keolari	Mancherial	Purna	Kopergaon	Pachegaon
		River/Stream	Khobragarhi	Khanan	Wainganga	Godavari	Purna	Godavari	Pravara
(1)	(2)	(3)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 1144.00	0.00 2627.00	0.00 642.10	0.00 2212.00	0.00 470.30	0.00 991.10	0.00 424.90
2	Temperature (°C)	Min Max	17.00 28.50	14.00 24.00	17.00 28.00	12.50 29.50	18.00 18.00	26.00 26.00	23.00 23.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	6.70 8.00	7.60 8.30	7.60 8.40	7.00 8.20	8.10 8.10	6.90 7.80	7.50 7.50
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	1.00 1.80	1.30 2.60	0.80 2.00	1.80 4.50	4.40 4.40	2.50 3.00	2.30 2.30
6	Sodium (Na)	Min Max	6.60 14.60	15.80 38.40	10.70 22.70	41.20 74.90	42.40 42.40	12.60 32.10	45.90 45.90
7	Calcium (Ca)	Min Max	16.00 30.00	28.00 65.00	30.00 53.00	29.00 42.00	33.00 33.00	20.00 42.00	24.00 24.00
8	Magnesium (Mg)	Min Max	0.00 6.40	6.90 23.70	8.90 48.60	13.80 21.40	18.00 18.00	10.70 24.80	13.60 13.60
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 1.60	0.00 0.20	0.00 0.20	0.00 0.2	0.10 0.10	0.00 0.20	0.30 0.30
11	Ammonia (NH ₃ -N)	Min Max	0.01 0.86	0.00 1.03	0.02 0.79	0.01 0.31	0.01 0.01	0.01 0.06	0.01 0.01
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 4.90	0.00 8.20	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
13	Bicarbonate (HCO ₃)	Min Max	48.00 101.00	116.00 321.00	140.00 297.00	187.00 281.00	128.00 128.00	83.00 183.00	137.00 137.00
14	Chloride (CL)	Min Max	3.70 13.10	4.40 24.90	5.10 23.40	22.90 56.50	25.50 25.50	3.90 3.90	45.50 45.50
15	Fluoride (F) (F)	Min Max	0.08 0.66	0.10 0.92	0.10 0.92	0.53 0.98	0.33 0.33	0.20 0.20	0.93 0.93
16	Sulphate (SO ₄)	Min Max	5.00 12.80	4.90 37.50	4.10 28.00	20.60 55.00	136.00 136.00	25.30 104.80	33.00 33.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	1.40 7.83	0.41 14.24	0.51 14.05	0.02 0.52	3.76 3.76	2.27 4.10	1.40 1.40
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.05	0.00 0.04	0.00 0.03	0.00 0.08	0.13 0.13	0.02 0.06	0.00 0.00
20	Phosphate (PO ₄)	Min Max	0.09 0.23	0.08 0.33	0.08 0.30	0.02 0.46	0.17 0.17	0.14 0.14	0.20 0.20
21	Silica (SiO ₂)	Min Max	0.90 24.40	7.60 45.70	9.20 44.60	13.30 26.60	19.10 19.10	20.90 20.90	36.80 36.80

Source: Water Quality Year Book (Godavari Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IV Basin Godavari									
Sl. No.	Parameter	Site name	Wairagarh	Ramakona	Keolari	Mancherial	Purna	Kopergaon	Pachegaon
		River/Stream	Khobragarhi	Khanan	Wainganga	Godavari	Purna	Godavari	Pravara
(1)	(2)	(3)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
22	DO (Dissolved Oxygen)	Min Max	6.20 8.00	3.80 11.20	4.00 8.50	4.40 7.00	5.10 5.10	5.90 6.00	5.80 5.80
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	1.00 3.40	1.00 25.00	1.20 45.00	0.40 2.30	0.90 0.90	1.90 2.00	1.70 1.70
24	Total Coliform (No. per 100 ml)	Min Max	20.00 800.00	20.00 2200.00	40.00 16000.00	140.00 16000.00	16000.00 16000.00	16000.00 16000.00	3500.00 3500.00
25	Faecal Coliform (No. per 100 ml)	Min Max	20.00 170.00	20.00 170.00	20.00 2800.00	20.00 16000.00	16000.00 16000.00	2400.00 16000.00	40.00 40.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	0.80 0.80	0.40 0.40	0.70 0.70	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.14 0.37	0.07 0.86	0.05 1.03	0.00 0.45	0.43 0.43	0.15 0.36	0.16 0.16
31	Cadmium (Cd)	Min Max	0.00 0.00	0.00 1.00	0.00 1.00	0.60 14.80	- -	- -	- -
32	Chromium (Cr)	Min Max	0.50 0.50	2.50 5.40	0.90 5.40	0.00 4.80	- -	- -	- -
33	Copper (Cu)	Min Max	13.70 13.70	16.40 16.40	5.20 5.20	1.50 1.50	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	0.40 0.40	0.80 14.00	0.70 9.00	4.60 11.00	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	0.00 0.00	0.00 0.00	0.00 0.00	- -	- -	- -
38	Zinc (Zn)	Min Max	5.00 5.00	1.00 5.00	0.00 4.00	4.00 6.00	- -	- -	- -
39	Total Hardness (HAR – Total)	Min Max	48.00 101.00	100.00 257.00	123.00 296.00	143.00 184.00	157.00 157.00	95.00 207.00	117.00 117.00
40	Na % (Sodium Percentage)	Min Max	12.00 34.00	17.00 26.00	11.00 24.00	33.00 48.00	36.00 36.00	21.00 25.00	46.00 46.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.30 0.80	0.60 1.00	0.40 0.80	1.30 2.50	1.50 1.50	0.60 1.00	1.90 1.90
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.40	0.00 1.00	0.00 0.60	0.00 1.60	0.00 0.00	0.00 0.00	0.00 0.00

Source: Water Quality Year Book (Godavari Basin) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.
2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

V Basin : Krishna												
Sl. No.	Parameter	Site name	Vijayawada	Keesara	Madhira	Paleru Bridge	Wadenapally	Dameracherla	Halia	Bawapuram	Mantralayam	T. Ramapuram
		River/Stream	Krishna	Munneru	Wyra	Paleru	Krishna	Musi	Halia	Tungabhadra	Tungabhadra	Hagari
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 2456.00	0.00 514.80	0.00 173.10	0.00 158.20	0.00 4272.00	0.00 381.00	0.00 71.70	0.00 5830.00	0.00 4810.00	0.00 647.50
2	Temperature (°C)	Min Max	32.00 32.00	25.00 30.00	23.00 29.00	23.00 28.00	25.00 29.00	24.50 30.00	19.00 29.00	21.00 29.00	19.00 28.00	22.00 28.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	8.60 8.60	7.80 8.40	7.80 8.70	7.60 8.50	7.90 8.60	8.00 8.70	7.90 8.70	7.70 8.80	7.60 8.60	7.60 8.50
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	3.20 3.20	2.00 6.80	1.80 5.20	1.30 8.20	1.80 6.60	0.50 15.00	2.50 5.50	2.00 6.50	2.30 7.40	2.00 8.00
6	Sodium (Na)	Min Max	50.80 50.80	70.80 155.70	83.80 141.20	55.00 117.60	39.70 122.20	69.40 251.50	75.60 167.40	26.60 215.80	24.70 232.20	89.00 338.20
7	Calcium (Ca)	Min Max	27.00 27.00	30.00 48.00	36.00 55.00	34.00 57.00	26.00 62.00	36.00 63.00	31.00 47.00	22.00 54.00	18.00 58.00	22.00 68.00
8	Magnesium (Mg)	Min Max	15.10 15.10	17.00 26.70	18.50 31.30	19.90 36.50	15.30 36.40	20.60 36.40	17.90 27.60	11.70 30.10	9.70 32.10	12.10 38.60
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.10 0.10	0.00 0.20	0.00 0.20	0.00 0.20	0.00 0.20	0.00 0.20	0.00 0.20	0.00 0.30	0.00 0.30	0.00 0.20
11	Ammonia (NH ₃ -N)	Min Max	0.00 0.00	0.00 0.02	0.00 0.16	0.00 0.16	0.00 0.17	0.00 0.20	0.00 0.15	0.00 0.16	0.00 0.21	0.00 0.17
12	Carbonate (CO ₃)	Min Max	5.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00	0.00 5.00
13	Bicarbonate (HCO ₃)	Min Max	162.00 162.00	178.00 320.00	232.00 351.00	212.00 377.00	139.00 252.00	202.00 353.00	254.00 351.00	95.00 284.00	90.00 289.00	127.00 324.00
14	Chloride (CL)	Min Max	67.20 67.20	63.00 147.60	69.70 131.60	45.30 127.40	35.80 112.20	67.90 286.90	64.40 123.50	21.60 197.20	19.70 202.30	63.50 304.60
15	Fluoride (F) (F)	Min Max	0.47 0.47	0.86 1.01	0.77 1.07	0.56 1.46	0.39 1.07	0.74 1.62	0.81 1.44	0.36 1.07	0.37 1.03	0.72 1.08
16	Sulphate (SO ₄)	Min Max	48.70 48.70	40.30 100.80	35.90 93.80	44.50 125.00	25.30 168.00	49.80 137.50	59.80 105.30	30.00 279.00	27.50 256.00	96.00 499.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	1.19 1.19	0.10 1.37	0.45 2.44	0.34 1.68	0.57 1.57	0.27 1.74	0.35 1.30	0.20 2.03	0.40 2.37	0.41 2.80
19	Nitrite (NO ₂ -N)	Min Max	0.03 0.03	0.00 0.48	0.00 0.16	0.00 0.07	0.00 0.22	0.00 0.14	0.00 0.28	0.00 0.36	0.00 0.47	0.00 0.17
20	Phosphate (PO ₄)	Min Max	0.11 0.11	0.09 0.17	0.08 0.23	0.07 0.20	0.09 0.23	0.01 0.42	0.06 0.19	0.07 0.58	0.09 0.53	0.06 0.52
21	Silica (SiO ₂)	Min Max	12.80 12.80	9.60 19.50	11.90 16.50	16.50 36.80	11.00 22.90	18.60 40.80	17.60 39.00	8.20 19.20	6.00 20.90	7.80 17.60

Source: Water Quality Year Book (Krishna Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

V Basin : Krishna												
Sl. No.	Parameter	Site name	Vijayawada	Keesara	Madhira	Paleru Bridge	Wadenapally	Dameracherla	Halia	Bawapuram	Mantralayam	T. Ramapuram
(1)	(2)	River/Stream	Krishna	Munneru	Wyra	Paleru	Krishna	Musi	Halia	Tungabhadra	Tungabhadra	Hagari
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	DO (Dissolved Oxygen)	Min Max	6.70 6.70	4.50 7.70	4.70 8.40	0.70 7.90	4.60 8.60	5.30 7.90	5.40 7.50	4.00 7.30	4.30 7.70	4.40 7.80
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	1.60 1.60	0.20 1.90	0.20 1.70	0.40 1.00	0.20 1.60	0.20 3.80	0.10 1.20	0.40 1.60	0.50 1.20	0.10 2.10
24	Total Coliform (No. per 100 ml)	Min Max	16000.00 16000.00	230.00 16000.00	80.00 16000.00	40.00 16000.00	20.00 16000.00	2.00 16000.00	20.00 16000.00	80.00 16000.00	2.00 16000.00	140.00 16000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	16000.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00	2.00 16000.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	2.98 2.98	0.01 0.01	3.44 3.44	3.55 3.55	0.10 0.10	11.79 11.79	8.32 8.32	13.81 13.81
30	Boron (ppm) (B)	Min Max	0.19 0.19	0.01 0.77	0.04 0.68	0.03 0.37	0.00 0.37	0.04 0.54	0.03 0.49	0.02 0.58	0.03 0.68	0.03 0.98
31	Cadmium (Cd)	Min Max	- -	2.90 2.90	1.17 3.00	0.90 2.00	0.55 2.00	1.52 3.00	1.33 3.00	1.41 5.48	1.38 5.17	2.23 7.89
32	Chromium (Cr)	Min Max	- -	0.19 0.19	0.00 22.25	0.00 2.59	0.00 7.72	0.00 3.85	0.00 3.51	0.00 3.93	0.00 8.16	2.24 6.51
33	Copper (Cu)	Min Max	- -	- -	2.89 2.89	1.56 1.56	1.50 1.50	1.84 1.84	1.76 1.76	1.90 1.90	1.55 1.55	1.70 1.70
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	19.79 19.79	4.59 18.00	3.88 15.00	2.89 14.00	6.51 20.00	5.26 17.00	5.66 30.30	5.75 31.39	8.70 43.57
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	0.23 0.23	0.08 0.08	0.14 0.14	0.10 0.10	0.13 0.13	0.09 0.09	0.09 0.09	0.00 0.00
38	Zinc (Zn)	Min Max	- -	8.50 8.50	0.00 11.00	1.00 11.00	1.00 15.00	1.00 11.00	1.00 8.60	3.00 10.00	2.00 8.80	4.00 16.28
39	Total Hardness (HAR _ Total)	Min Max	131.00 131.00	146.00 231.00	167.00 268.00	168.00 282.00	130.00 306.00	176.00 308.00	153.00 233.00	104.00 255.00	85.00 278.00	105.00 331.00
40	Na % (Sodium Percentage)	Min Max	45.00 45.00	40.00 66.00	50.00 61.00	31.00 51.00	36.00 57.00	38.00 63.00	46.00 69.00	35.00 68.00	38.00 71.00	45.00 74.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.90 1.90	2.00 5.30	2.70 4.30	1.50 3.30	1.50 3.80	2.10 6.30	2.40 5.80	1.10 6.40	1.20 6.60	2.50 9.20
42	RSC (Residual Sodium Carbonate)	Min Max	0.20 0.20	0.00 1.70	0.40 2.10	0.00 0.60	0.00 0.20	0.00 0.70	0.00 2.60	0.00 0.20	0.00 0.20	0.00 0.40

Source: Water Quality Year Book (Krishna Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

V Basin : Krishna												
Sl. No.	Parameter	Site name	Kellodu	Marol	Haralahalli	Byaladahalli	Kuppelur	Honnali	Shimoga	Holchonnur	Yadgir	Malkhed
		River/Stream	Vedavathi	Varada	Tungabhadra	Haridra	Kumudavathi	Tungabhadra	Tunga	Bhadra	Bhima	Kagna
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 128.90	0.00 1121.00	0.00 3986.00	0.00 243.00	0.00 421.50	11.48 4995.00	0.06 2834.00	6.64 963.10	0.00 2084.00	0.07 1320.00
2	Temperature (°C)	Min Max	27.00 28.00	25.00 27.00	24.50 25.50	23.50 25.50	25.00 27.50	25.00 30.00	23.50 28.50	21.50 28.00	23.00 27.00	23.00 29.00
3	pH_GEN (Negative logarithm of hydrogen iron concentration)	Min Max	7.70 8.40	6.80 8.00	7.30 8.20	7.60 8.30	7.00 8.30	7.30 8.00	7.10 7.6	6.80 8.10	7.70 8.20	8.00 8.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	10.50 12.30	0.80 5.00	1.20 12.70	3.70 15.00	2.10 8.70	1.20 5.30	1.30 4.50	0.90 11.50	2.80 6.60	2.60 4.80
6	Sodium (Na)	Min Max	37.20 37.50	4.20 16.60	11.50 66.70	39.80 111.00	15.40 40.50	5.90 15.50	3.00 7.80	6.00 24.20	47.50 119.00	31.10 50.80
7	Calcium (Ca)	Min Max	26.00 40.00	10.00 22.00	11.00 32.00	22.00 50.00	13.00 50.00	6.00 18.00	6.00 11.00	8.00 26.00	30.00 39.00	29.00 46.00
8	Magnesium (Mg)	Min Max	10.70 15.60	3.90 8.70	4.90 16.50	9.70 27.20	4.90 22.40	2.40 10.70	1.90 6.80	2.90 8.70	16.50 22.40	16.20 24.20
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.10	0.00 1.20	0.00 0.10	0.10 0.10	0.00 1.50	0.00 0.10	0.00 0.10	0.00 1.30	0.00 0.20	0.00 0.20
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.00 0.11	0.00 0.03
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.50
13	Bicarbonate (HCO ₃)	Min Max	166.00 221.00	27.00 93.00	53.00 192.00	187.00 378.00	53.00 216.00	34.00 108.00	23.00 54.00	34.00 102.00	134.00 235.00	200.00 307.00
14	Chloride (CL)	Min Max	32.00 49.30	8.90 37.30	15.60 79.50	37.60 105.80	17.40 96.60	7.80 23.80	7.10 19.50	7.80 43.70	40.70 84.20	18.50 27.90
15	Fluoride (F) (F)	Min Max	0.19 0.36	0.04 0.21	0.04 0.48	0.06 0.89	0.06 0.38	0.04 0.29	0.06 0.21	0.02 0.23	0.29 0.90	0.43 0.72
16	Sulphate (SO ₄)	Min Max	6.80 17.90	4.40 11.20	4.30 23.60	7.40 49.80	10.10 16.20	3.90 5.40	1.80 3.50	3.50 10.60	63.00 127.50	17.90 25.80
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	1.05 1.22	0.83 3.05	0.59 1.32	1.53 3.15	1.75 3.76	0.43 2.19	0.29 1.13	0.34 3.17	0.05 1.78	0.36 3.57
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.01	0.01 0.06	0.01 0.23	0.01 0.07	0.00 0.11	0.01 0.76	0.01 0.17	0.00 0.10	0.00 0.06	0.01 0.32
20	Phosphate (PO ₄)	Min Max	0.00 0.03	0.00 0.05	0.00 0.07	0.02 0.72	0.01 0.09	0.01 0.03	0.00 0.01	0.02 0.18	0.14 0.17	0.06 0.13
21	Silica (SiO ₂)	Min Max	5.60 7.30	4.30 14.50	4.70 8.80	5.20 11.30	4.40 8.30	4.60 6.70	4.60 6.20	3.80 13.30	13.70 17.8	20.40 30.30

Source: Water Quality Year Book (Krishna Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

V Basin : Krishna												
Sl. No.	Parameter	Site name River/Stream	Kellodu Vedavathi	Marol Varada	Haralahalli Tungabhadra	Byaladahalli Haridra	Kuppelur Kumudavathi	Honnali Tungabhadra	Shimoga Tunga	Holehonnur Bhadra	Yadgir Bhima	Malkhed Kagna
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
22	DO (Dissolved Oxygen)	Min Max	- -	- -	5.20 6.10	- -	5.50 6.70	4.00 6.80	3.50 5.90	3.80 8.20	6.20 7.80	4.30 7.90
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	- -	- -	0.40 1.80	- -	0.80 1.90	0.20 2.30	0.40 1.10	0.60 3.30	1.30 2.50	0.20 1.10
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	800.00 16000.00	140.00 16000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	230.00 160000.00	2.00 16000.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	1.57 1.57
30	Boron (ppm) (B)	Min Max	- -	0.02 0.21	0.02 0.41	0.04 0.43	0.03 0.44	0.01 0.69	0.09 0.65	0.03 0.87	0.17 0.23	0.00 0.42
31	Cadmium (Cd)	Min Max	- -	0.00 0.00	0.10 0.10	0.20 0.20	- -	0.00 0.00	0.10 0.10	0.00 0.10	- -	0.57 2.00
32	Chromium (Cr)	Min Max	- -	2.60 2.60	6.60 6.60	0.00 0.00	- -	1.00 1.40	0.30 1.20	0.00 0.40	- -	0.00 0.57
33	Copper (Cu)	Min Max	- -	4.80 4.80	2.50 2.50	4.50 4.50	- -	4.00 7.50	3.80 4.80	0.90 13.70	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	1.20 1.20	1.70 1.70	1.30 1.30	- -	0.80 1.10	0.90 2.10	0.50 1.40	- -	6.48 14.00
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.31 0.31
38	Zinc (Zn)	Min Max	- -	10.00 10.00	10.00 10.00	9.00 9.00	- -	9.30 10.00	8.00 8.70	9.00 10.50	- -	3.00 9.20
39	Total Hardness (HAR _ Total)	Min Max	109.00 165.00	40.00 92.00	56.00 149.00	133.00 233.00	52.00 217.00	32.00 89.00	24.00 56.00	32.00 100.00	143.00 191.00	140.00 206.00
40	Na % (Sodium Percentage)	Min Max	31.00 40.00	18.00 34.00	30.00 47.00	36.00 50.00	23.00 40.00	17.00 33.00	16.00 22.00	17.00 41.00	42.00 61.00	27.00 41.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.30 1.60	0.30 0.90	0.70 2.40	1.50 3.20	0.70 1.20	0.40 0.80	0.20 0.50	0.30 1.20	1.70 4.10	1.00 1.80
42	RSC (Residual Sodium Carbonate)	Min Max	0.40 0.60	0.00 0.00	0.00 0.20	0.30 1.60	0.00 0.00	0.00 0.10	0.00 0.00	0.00 0.40	0.00 0.20	0.00 1.50

Source: Water Quality Year Book (Krishna Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

V Basin : Krishna													
Sl. No.	Parameter	Site name	Takli	Sarati	Phulgaon	Huvinhedgi	Cholachagudda	Gokakfalls	Kurundwad	Arujnwad	Samdoli	Karad	Warunji
		River/Stream	Bhima	Nira	Bhima	Krishna	Malaprabha	Ghataprabha	Krishna	Krishna	Varna	Krishna	Koyna
(1)	(2)	(3)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 1084.00	0.00 120.80	0.00 1101.00	0.92 4.78	0.00 189.80	0.00 451.60	0.00 4197.00	0.00 2606.00	0.00 1115.00	0.00 1700.00	0.00 1047.00
2	Temperature (°C)	Min Max	25.00 25.00	26.00 26.00	22.00 23.50	22.00 29.00	23.00 26.40	20.50 23.00	23.00 26.50	23.50 27.00	21.00 21.50	23.50 24.00	19.00 24.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.90 7.90	7.90 7.90	7.80 7.80	7.80 8.50	7.60 8.30	7.30 8.00	7.60 7.80	8.00 8.10	7.70 7.80	7.50 7.70	7.50 7.60
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	2.80 2.80	3.70 3.70	0.80 0.90	1.40 4.40	1.80 2.90	0.10 1.20	0.40 1.50	0.10 1.20	0.10 1.20	0.70 1.10	0.20 0.20
6	Sodium (Na)	Min Max	37.00 37.00	49.30 49.30	23.40 24.20	25.20 188.20	45.40 95.50	16.00 40.50	15.00 31.80	28.10 36.00	32.10 32.20	23.50 24.30	21.00 26.20
7	Calcium (Ca)	Min Max	48.00 48.00	59.00 59.00	21.00 64.00	22.00 53.00	19.00 66.00	24.00 53.00	27.00 37.00	61.00 66.00	47.00 50.00	24.00 35.00	29.00 30.00
8	Magnesium (Mg)	Min Max	17.50 17.50	24.30 24.30	4.90 5.80	12.10 30.00	6.80 21.40	8.80 12.60	3.90 10.70	11.70 13.60	5.80 15.60	2.90 3.90	4.90 7.80
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	2.00 2.00	3.00 3.00	1.30 1.60	0.00 0.20	0.00 2.90	0.00 3.00	0.90 2.20	3.10 3.40	1.60 2.50	0.90 1.00	0.20 1.70
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	0.00 0.13	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 5.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
13	Bicarbonate (HCO ₃)	Min Max	125.00 125.00	188.00 188.00	56.00 224.00	83.00 296.00	115.00 188.00	75.00 183.00	83.00 99.00	178.00 195.00	173.00 173.00	91.00 98.00	67.00 76.00
14	Chloride (CL)	Min Max	47.90 47.90	67.50 67.50	31.00 31.00	23.50 199.00	63.30 184.00	32.90 54.80	34.20 43.60	39.90 51.10	44.10 45.20	30.30 33.70	28.90 34.00
15	Fluoride (F) (F)	Min Max	0.37 0.37	0.36 0.36	0.25 0.25	0.24 1.30	0.29 0.62	0.23 0.36	0.25 0.28	0.26 0.37	0.24 0.34	0.27 0.29	0.23 0.27
16	Sulphate (SO ₄)	Min Max	86.30 86.30	98.60 98.60	11.50 13.70	28.80 242.00	31.40 50.70	24.80 43.70	21.90 27.30	30.30 47.30	30.20 51.30	10.60 13.10	16.70 28.40
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	2.09 2.09	2.80 2.80	0.72 1.23	0.19 1.86	1.03 2.48	1.57 2.25	1.00 1.96	2.27 2.37	1.54 2.21	0.90 0.96	0.78 1.58
19	Nitrite (NO ₂ -N)	Min Max	0.05 0.05	0.00 0.00	0.01 0.03	0.00 0.08	0.00 0.01	0.01 0.01	0.00 0.00	0.00 0.00	0.00 0.01	0.00 0.03	0.00 0.01
20	Phosphate (PO ₄)	Min Max	0.02 0.02	0.03 0.03	0.01 0.02	0.06 0.31	0.00 0.02	0.00 0.01	0.01 0.06	0.00 0.02	0.01 0.03	0.01 0.04	0.01 0.02
21	Silica (SiO ₂)	Min Max	40.80 40.80	33.10 33.10	13.90 27.10	7.90 37.60	3.20 89.60	8.50 26.90	0.40 32.90	6.00 32.40	0.90 24.80	24.40 25.70	20.20 25.20

Source: Water Quality Year Book (Krishna Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

V Basin : Krishna													
Sl. No.	Parameter	Site name	Takli	Sarati	Phulgaon	Huvinhedgi	Cholachagudda	Gokakfalls	Kurundwad	Arujnwad	Samdoli	Karad	Warunji
		River/Stream	Bhima	Nira	Bhima	Krishna	Malaprabha	Ghataprabha	Krishna	Krishna	Varna	Krishna	Koyna
(1)	(2)	(3)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
22	DO (Dissolved Oxygen)	Min Max	- -	- -	- -	4.00 7.80	7.50 7.90	- -	7.40 7.70	- -	- -	6.20 6.20	6.70 6.90
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.90 0.90	2.30 2.30	1.10 4.00	0.60 1.80	0.70 3.60	1.40 1.80	0.60 4.50	1.00 2.00	0.70 4.50	2.10 2.40	3.00 3.20
24	Total Coliform (No. per 100 ml)	Min Max	54000.00 54000.00	7900.00 7900.00	35000.00 130000.00	130.00 16000.00	7800.00 49000.00	4000.00 160000.00	17000.00 240000.00	4600.00 17000.00	33000.00 49000.00	1600000.00 1600000.00	17000.00 35000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	35000.00 35000.00	4900.00 4900.00	13000.00 79000.00	2.00 16000.00	45.00 33000.00	2000.00 92000.00	14000.00 130000.00	3300.00 13000.00	23000.00 33000.00	920000.00 920000.00	13000.00 24000.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	3.24 3.24	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.07 0.07	0.01 0.01	0.04 0.06	0.00 0.43	0.04 0.08	0.03 0.07	0.02 0.07	0.05 0.05	0.02 0.07	0.05 0.07	0.05 0.09
31	Cadmium (Cd)	Min Max	- -	- -	- -	1.28 3.00	0.26 0.26	1.29 1.29	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	0.00 2.62	35.31 35.31	7.43 7.43	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	1.53 1.53	15.98 15.98	5.21 5.21	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	5.30 22.00	1.59 1.59	1.52 1.52	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	0.08 0.08	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	1.00 12.00	10.00 10.00	10.00 10.00	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	193.00 193.00	250.00 250.00	72.00 185.00	105.00 252.00	121.00 253.00	113.00 181.00	84.00 137.00	209.00 213.00	149.00 181.00	76.00 100.00	96.00 105.00
40	Na % (Sodium Percentage)	Min Max	29.00 29.00	30.00 30.00	22.00 41.00	33.00 76.00	38.00 48.00	24.00 34.00	19.00 39.00	22.00 27.00	28.00 32.00	34.00 41.00	32.00 35.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.20 1.20	1.40 1.40	0.80 1.20	1.00 7.10	1.60 2.60	0.70 1.30	0.60 1.20	0.80 1.10	1.00 0.00	1.00 1.20	0.90 1.10
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 1.60	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.10	0.00 0.00

Source: Water Quality Year Book (Krishna Basin) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery												
Sl. No.	Parameter	Site name	Gopurajapuram	Annavasal	Nallathur	Menangudi	Porakudi	Peralam	Thengudi	Musiri	Nallamaranpatt y	Elunuthimangalam
		River/Stream	Puravidaiyanar	Nattar	Nandalar	Noolar	Arasalar	Vanjiyar	Thirumalairajana r	Cauvery	Amaravathi	Noyyal
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 30.20	0.00 4.71	0.00 87.15	0.00 25.20	0.00 41.94	0.00 4.63	0.00 54.46	0.00 751.70	0.00 394.00	0.00 76.39
2	Temperature (°C)	Min Max	23.00 31.00	22.00 30.50	25.00 30.00	26.00 31.00	28.50 31.50	23.50 31.00	24.00 30.00	20.50 30.50	26.50 27.50	24.00 29.50
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.50 7.90	7.20 8.10	7.60 8.10	7.30 9.00	7.80 7.80	7.60 8.50	7.40 8.30	7.40 8.50	7.20 8.20	7.50 8.80
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	3.00 3.10	2.50 6.70	2.80 6.30	2.30 4.10	2.80 3.30	2.70 5.50	2.50 6.80	2.70 8.70	2.20 5.70	17.70 37.00
6	Sodium (Na)	Min Max	24.60 34.60	19.60 69.70	45.60 75.00	22.00 106.00	19.80 38.40	21.30 68.40	30.50 99.50	17.30 115.00	8.50 47.70	256.00 739.00
7	Calcium (Ca)	Min Max	24.00 24.00	16.00 41.00	19.00 32.00	16.00 27.00	17.00 18.00	15.00 39.00	17.00 41.00	12.00 55.00	14.00 34.00	42.00 85.00
8	Magnesium (Mg)	Min Max	12.30 12.30	9.70 18.40	10.20 20.50	9.20 12.30	10.80 11.40	9.70 15.40	9.20 22.50	10.50 39.10	6.50 29.90	45.80 114.70
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	- -	0.00 0.00	0.00 0.00	- -	- -	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.03	0.00 0.10
11	Ammonia (NH ₃ -N)	Min Max	- -	0.06 0.06	0.08 0.08	0.10 0.10	0.09 0.09	0.05 0.08	0.06 0.15	0.02 0.49	0.04 0.25	0.02 0.33
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 22.60	0.00 0.00	0.00 12.00	0.00 22.30	0.00 27.70	0.00 0.00	0.00 110.80
13	Bicarbonate (HCO ₃)	Min Max	134.00 140.00	92.00 214.00	132.00 226.00	55.00 171.00	92.00 121.00	61.00 207.00	116.00 226.00	113.00 232.00	66.00 206.00	263.00 446.00
14	Chloride (CL)	Min Max	42.50 47.30	28.40 91.80	61.20 99.30	39.70 134.80	34.00 50.50	36.90 91.80	39.70 129.20	22.50 168.30	15.00 69.70	335.10 973.20
15	Fluoride (F) (F)	Min Max	0.26 0.28	0.19 0.39	0.30 0.49	0.19 0.51	0.29 0.34	0.20 0.32	0.30 0.69	0.19 0.54	0.20 0.24	1.00 1.00
16	Sulphate (SO ₄)	Min Max	5.10 8.50	10.40 27.40	6.30 32.40	12.20 19.50	10.20 16.00	9.00 19.60	10.60 33.00	8.00 59.00	6.30 40.40	135.10 321.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.76 2.82	0.53 2.99	0.64 2.97	0.70 2.31	0.67 0.71	0.63 2.28	0.60 3.39	0.20 3.80	0.06 2.38	4.00 11.00
19	Nitrite (NO ₂ -N)	Min Max	- -	0.00 0.00	0.01 0.01	0.00 0.00	0.00 0.00	0.00 0.02	0.00 0.02	0.00 0.01	0.00 0.00	- -
20	Phosphate (PO ₄)	Min Max	- -	0.01 0.01	0.01 0.01	0.00 0.00	0.00 0.00	0.01 0.03	0.01 0.01	0.00 0.10	0.00 0.00	0.55 1.20
21	Silica (SiO ₂)	Min Max	- -	- -	- -	- -	- -	- -	- -	11.30 22.10	17.10 17.10	30.50 46.90

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery												
Sl. No.	Parameter	Site name	Gopurajapuram	Annavasal	Nallathur	Menangudi	Porakudi	Peralam	Thengudi	Musiri	Nallamaranpatt y	Elunuthimangalam
		River/Stream	Puravidaiyanar	Nattar	Nandalar	Noolar	Arasalar	Vanjiyar	Thirumalairajana r	Cauvery	Amaravathy	Noyyal
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	DO (Dissolved Oxygen)	Min	-	-	-	-	-	-	4.40	6.20	7.60	5.60
		Max	-	-	-	-	-	-	6.10	7.10	8.90	8.10
23	BOD3-27 (Biochemical Oxygen Demand)	Min	1.60	1.30	1.00	1.30	0.90	1.10	0.60	0.40	1.40	1.50
		Max	1.90	2.00	2.00	1.50	1.50	1.80	2.20	6.40	5.50	5.50
24	Total Coliform (No. per 100 ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
25	Faecal Coliform (No. per 100 ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
26	Total plate count (No. per 100 ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
27	Phytoplankton (No. per ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
28	Zooplankton (No. per Litre)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
29	Arsenic (ppm) (As)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
30	Boron (ppm) (B)	Min	-	-	-	-	-	-	-	0.00	-	0.20
		Max	-	-	-	-	-	-	-	0.00	-	0.40
31	Cadmium (Cd)	Min	-	0.25	1.37	-	-	0.33	0.02	0.17	0.24	1.00
		Max	-	0.25	1.37	-	-	0.33	0.84	1.29	0.89	16.00
32	Chromium (Cr)	Min	-	8.18	18.27	-	-	52.06	0.22	7.03	7.98	2.00
		Max	-	8.18	18.27	-	-	52.06	3.59	19.80	34.26	4.00
33	Copper (Cu)	Min	-	3.53	14.33	-	-	3.87	3.84	4.08	0.52	1.00
		Max	-	3.53	14.33	-	-	3.87	6.73	5.21	23.31	15.00
34	Cyanide (Cn)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
35	Lead (Pb)	Min	-	0.36	0.48	-	-	0.07	0.01	2.00	1.72	14.80
		Max	-	0.36	0.48	-	-	0.07	0.55	8.00	3.33	21.40
36	Manganese (Mn)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
37	Mercury (Hg)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
38	Zinc (Zn)	Min	-	4.00	3.00	-	-	3.00	3.00	0.00	0.01	0.01
		Max	-	4.00	3.00	-	-	3.00	11.20	4.00	5.00	4.90
39	Total Hardness (HAR _ Total)	Min	110.00	81.00	89.00	81.00	90.00	77.00	81.00	97.00	62.00	303.00
		Max	110.00	178.00	161.00	119.00	91.00	161.00	195.00	300.00	209.00	671.00
40	Na % (Sodium Percentage)	Min	32.00	32.00	43.00	32.00	32.00	32.00	31.00	27.00	22.00	54.00
		Max	40.00	48.00	52.00	71.00	47.00	48.00	55.00	52.00	33.00	72.00
41	SAR (Sodium Adsorption Ratio)	Min	1.00	1.00	1.80	1.00	0.90	1.00	1.10	0.80	0.50	5.30
		Max	1.40	2.30	2.60	4.90	1.80	2.40	3.30	2.90	1.40	12.50
42	RSC (Residual Sodium Carbonate)	Min	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	0.10	0.00	0.50	0.90	0.20	0.30	0.60	0.10	0.00	0.00

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery												
Sl. No.	Parameter	Site name	Kodumudi	Savandapur	Thengumarahada	Gandhavayal	Nellithurai	Urachikottai	Thevur	Sevanur	Thoppur	Kudlur
		River/Stream	Cauvery	Bhavani	Moyar	Gandhayar	Bhavani	Cauvery	Sarabenga	Chittar	Thoppaiyar	Palar
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.29 783.70	1.31 497.90	0.33 33.03	0.01 64.42	0.00 261.30	0.00 712.50	0.00 3.07	0.00 15.03		0.00 70.55
2	Temperature (°C)	Min Max	23.50 28.50	26.00 30.50	9.20 26.50	19.00 24.00	21.00 24.50	24.00 30.50	26.00 28.00	26.00 29.50		22.00 26.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.10 8.80	7.50 8.20	6.70 8.30	7.20 8.50	7.10 8.30	7.70 8.70	7.70 8.00	7.80 8.10		7.50 9.00
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -		- -
5	Potassium (K)	Min Max	2.40 9.10	2.30 9.30	0.50 2.40	1.10 3.30	0.50 1.80	2.20 4.70	4.80 6.60	4.80 9.30		5.00 6.10
6	Sodium (Na)	Min Max	15.90 102.50	13.80 52.00	4.80 8.50	5.00 13.60	2.40 13.80	12.00 36.00	36.20 75.00	32.70 63.00		13.00 90.50
7	Calcium (Ca)	Min Max	15.00 37.00	14.00 48.00	10.00 27.00	8.00 30.00	3.00 14.00	15.00 29.00	26.00 66.00	20.00 52.00		14.00 35.00
8	Magnesium (Mg)	Min Max	5.70 38.30	5.70 40.20	1.90 12.80	2.80 15.40	0.90 8.40	5.70 27.50	17.80 45.90	29.90 43.90		6.70 48.60
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -		- -
10	Iron (Fe)	Min Max	0.00 0.04	0.00 0.05	0.00 0.06	0.00 0.10	0.00 0.43	0.02 0.10	0.01 0.04	0.02 0.02		0.00 0.02
11	Ammonia (NH ₃ -N)	Min Max	0.05 0.32	0.00 0.29	0.03 0.31	0.03 0.33	0.01 0.48	0.00 0.32	0.01 0.36	0.05 0.45		0.01 0.34
12	Carbonate (CO ₃)	Min Max	0.00 27.90	0.00 0.00	0.00 9.20	0.00 9.20	0.00 9.20	0.00 22.90	0.00 0.00	0.00 0.00		0.00 41.50
13	Bicarbonate (HCO ₃)	Min Max	80.00 272.00	93.00 282.00	23.00 56.00	23.00 149.00	14.00 70.00	71.00 174.00	183.00 333.00	211.00 357.00		93.00 296.00
14	Chloride (CL)	Min Max	22.50 132.40	20.60 67.40	15.10 43.40	9.40 26.00	3.70 22.60	18.70 46.40	35.60 56.50	39.30 63.70		14.90 49.00
15	Fluoride (F) (F)	Min Max	0.14 0.53	0.12 0.44	0.05 0.09	0.00 0.00	0.03 0.09	0.17 0.50	0.59 0.79	0.45 0.74		0.46 0.79
16	Sulphate (SO ₄)	Min Max	5.10 38.70	7.50 49.00	1.70 14.80	2.30 7.90	1.00 7.60	4.10 25.70	39.40 46.20	18.50 39.40		10.10 42.40
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -		- -
18	Nitrate (NO ₃ -N)	Min Max	0.45 4.66	0.86 11.00	0.82 2.69	0.88 3.93	0.00 1.84	0.30 3.58	2.97 5.41	4.22 12.90		0.61 7.63
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.05	- -	0.01 0.03	0.00 0.00	0.00 0.01	0.00 0.03	0.00 0.00	0.03 0.03		0.00 0.00
20	Phosphate (PO ₄)	Min Max	0.00 0.07	0.00 0.03	0.00 0.10	0.00 0.10	0.00 0.10	0.01 0.04	0.00 0.00	0.00 0.00		0.00 0.00
21	Silica (SiO ₂)	Min Max	13.60 21.80	15.20 21.10	4.40 7.60	12.60 20.60	4.40 12.50	12.40 18.90	27.50 27.50	31.80 31.80		28.80 28.80

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

contd...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery												
Sl. No.	Parameter	Site name	Kodumudi	Savandapur	Thengumarahada	Gandhavayal	Nellithurai	Urachikottai	Thevur	Sevanur	Thoppur	Kudlur
(1)	(2)	River/Stream	Cauvery	Bhavani	Moyar	Gandhayar	Bhavani	Cauvery	Sarabenga	Chittar	Thoppaiyar	Palar
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
22	DO (Dissolved Oxygen)	Min	6.20	5.60	6.30	-	7.50	6.80	-	-	-	5.00
		Max	6.60	7.90	24.00	-	8.30	7.60	-	-	-	7.60
23	BOD3-27 (Biochemical Oxygen Demand)	Min	0.20	0.40	0.40	1.30	0.20	0.80	-	-	-	1.10
		Max	4.40	2.00	1.50	1.30	1.60	5.50	-	-	-	1.60
24	Total Coliform (No. per 100 ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
25	Faecal Coliform (No. per 100 ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
26	Total plate count (No. per 100 ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
27	Phytoplankton (No. per ml)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
28	Zooplankton (No. per Litre)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
29	Arsenic (ppm) (As)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
30	Boron (ppm) (B)	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	0.02	0.08	0.00	0.00	0.01	0.10	0.00	0.00	0.00	0.00
31	Cadmium (Cd)	Min	0.07	0.09	0.02	1.16	0.01	0.63	0.81	4.16	0.05	0.05
		Max	1.11	1.01	1.10	3.37	0.99	1.05	0.81	4.16	0.05	0.05
32	Chromium (Cr)	Min	3.54	4.19	8.81	4.02	4.81	1.96	1.60	4.51	3.10	3.10
		Max	35.36	12.30	10.63	11.51	18.76	9.53	1.60	4.51	3.10	3.10
33	Copper (Cu)	Min	2.89	2.52	2.24	1.20	0.01	1.62	0.95	1.35	1.62	1.62
		Max	6.56	3.86	4.64	1.40	6.54	10.02	0.95	1.35	1.62	1.62
34	Cyanide (Cn)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
35	Lead (Pb)	Min	0.65	0.73	0.30	0.00	0.41	0.54	0.83	2.24	4.89	4.89
		Max	1.72	1.78	1.59	2.00	1.76	1.81	0.83	2.24	4.89	4.89
36	Manganese (Mn)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
37	Mercury (Hg)	Min	-	-	-	-	-	-	-	-	-	-
		Max	-	-	-	-	-	-	-	-	-	-
38	Zinc (Zn)	Min	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
		Max	6.10	4.60	4.60	5.00	5.40	4.50	0.01	0.01	0.01	0.01
39	Total Hardness (HAR _ Total)	Min	71.00	87.00	35.00	34.00	12.00	63.00	155.00	194.00	76.00	76.00
		Max	252.00	287.00	95.00	139.00	70.00	171.00	267.00	314.00	249.00	249.00
40	Na % (Sodium Percentage)	Min	28.00	22.00	14.00	17.00	25.00	26.00	33.00	24.00	24.00	24.00
		Max	55.00	32.00	26.00	29.00	35.00	33.00	40.00	30.00	45.00	45.00
41	SAR (Sodium Adsorption Ratio)	Min	0.80	0.60	0.30	0.30	0.30	0.70	1.30	1.00	0.70	0.70
		Max	3.40	1.30	0.50	0.60	0.80	1.20	2.10	1.60	2.60	2.60
42	RSC (Residual Sodium Carbonate)	Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	0.50	0.00	0.00	0.00	0.00	0.20	0.60	0.10	1.40	1.40

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery												
Sl. No.	Parameter	Site name	Hogenakkal	Biligundulu	T. Bekuppe	T. K. Halli	Kollegal	Bendrahalli	T. Narasipur	Muthankera	K. M. Vadi	Akkihebbal
		River/Stream	Chinnar	Cauvery	Arkavathi	Shimsha	Cauvery	Suvarnavathi	Kabini	Kabini	Lakshmanthirha	Hemavathi
(1)	(2)	(3)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	<div> <div></div> <div>Dry Bed</div> <div></div> </div>	10.21 2289.00	4.03 21.34	0.00 186.70	0.00 4467.00	0.00 95.99	0.00 1035.00	0.00 789.70	0.00 91.15	0.62 634.20
2	Temperature (°C)	Min Max		26.00 29.00	24.00 26.00	25.00 30.00	25.00 29.00	20.00 24.00	23.50 29.00	21.00 27.00	23.50 26.50	23.00 29.50
3	pH_GEN (Negative logarithm of hydrogen iron concentration)	Min Max		7.60 8.40	7.40 8.30	7.50 8.40	7.20 8.30	7.30 8.30	6.90 8.30	6.90 7.60	6.90 8.30	7.50 8.60
4	Specific Conductance	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max		2.10 8.80	16.00 46.40	5.10 13.90	1.60 6.40	5.50 11.63	1.60 8.50	1.30 2.80	2.00 7.60	1.90 5.50
6	Sodium (Na)	Min Max		9.60 50.00	95.00 171.10	35.30 64.30	5.50 30.60	29.60 92.00	6.20 40.50	3.00 5.80	9.50 38.50	10.80 22.80
7	Calcium (Ca)	Min Max		10.00 51.00	59.00 94.00	37.00 58.00	6.00 43.00	27.00 45.00	6.00 45.00	5.00 9.00	19.00 42.00	24.00 40.00
8	Magnesium (Mg)	Min Max		3.90 21.40	22.40 36.90	12.60 28.20	2.90 20.40	9.70 21.40	3.90 25.30	1.90 16.20	7.80 27.20	9.70 19.40
9	Aluminium (Al)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max		0.10 0.20	0.00 0.50	0.00 0.20	0.00 0.30	0.00 0.30	0.00 0.50	0.00 0.00	0.00 0.40	0.00 0.10
11	Ammonia (NH ₃ -N)	Min Max		- -	- -	0.00 0.00	0.00 0.00	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max		0.00 20.40	0.00 16.80	0.00 10.80	0.00 10.80	0.00 0.00	0.00 0.00	- -	0.00 0.00	0.00 11.10
13	Bicarbonate (HCO ₃)	Min Max		59.00 289.00	315.00 537.00	218.00 304.00	47.00 228.00	193.00 426.00	41.00 311.00	18.00 40.00	83.00 305.00	136.00 233.00
14	Chloride (CL)	Min Max		13.10 66.40	137.00 245.30	22.00 66.40	8.90 33.40	19.90 50.80	8.90 35.10	3.90 11.40	7.80 37.30	13.10 31.20
15	Fluoride (F) (F)	Min Max		0.13 0.59	0.34 0.70	0.32 0.70	0.11 0.44	0.06 0.46	0.10 0.53	- -	0.13 0.49	0.02 0.78
16	Sulphate (SO ₄)	Min Max		4.10 16.80	11.90 51.50	14.20 40.60	3.80 11.50	7.90 14.90	3.10 7.70	0.40 5.10	5.30 13.20	3.60 9.40
17	Sulphite (SO ₃)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max		0.39 1.82	7.51 24.82	0.97 2.21	0.38 1.95	1.43 6.12	0.45 2.87	- -	1.05 3.15	0.46 1.89
19	Nitrite (NO ₂ -N)	Min Max		0.00 0.12	0.10 3.74	0.00 0.46	0.00 0.10	0.00 0.06	0.00 0.18	- -	0.01 0.12	0.00 0.07
20	Phosphate (PO ₄)	Min Max		0.00 0.08	0.00 3.35	0.02 0.13	0.00 0.12	0.01 0.07	0.00 0.08	- -	0.00 0.10	0.00 0.05
21	Silica (SiO ₂)	Min Max		4.40 20.20	10.30 59.20	9.90 18.00	4.40 20.20	9.20 21.20	4.30 18.60	- -	9.90 19.20	8.10 18.40

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

Basin : Cauvery												
Sl. No.	Parameter	Site name	Hogenakkal	Biligundulu	T. Bekuppe	T. K. Halli	Kollegal	Bendrahalli	T. Narasipur	Muthankera	K. M. Vadi	Akkihebbal
(1)	(2)	River/Stream	Chinnar	Cauvery	Arkavathi	Shimsha	Cauvery	Suvarnavathi	Kabini	Kabini	Lakshmanthirt	Hemavathi
		(3)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
22	DO (Dissolved Oxygen)	Min Max	↕ Dry Bed	4.70 7.80	1.40 5.30	2.70 5.90	3.90 7.70	- -	4.70 7.50	4.60 6.80	- -	3.90 8.20
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max		0.60 2.60	6.60 15.80	1.00 1.80	0.50 2.40	- -	0.60 3.20	0.20 2.00	- -	0.80 3.80
24	Total Coliform (No. per 100 ml)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max		0.02 0.56	0.15 0.53	0.04 0.40	0.02 0.60	0.03 0.17	0.02 0.61	- -	0.02 0.28	0.03 0.60
31	Cadmium (Cd)	Min Max		0.00 0.20	0.80 4.00	0.10 0.20	0.00 0.00	0.10 0.10	0.00 0.00	0.10 0.10	0.10 0.40	0.10 0.10
32	Chromium (Cr)	Min Max		1.40 3.90	1.40 1.50	0.40 9.00	0.40 0.70	2.00 2.00	0.30 0.30	4.40 4.40	0.80 3.00	0.20 5.10
33	Copper (Cu)	Min Max		5.30 9.70	3.80 7.30	2.90 5.00	0.60 3.00	7.10 7.10	5.00 5.00	6.50 6.50	6.40 8.50	0.20 5.00
34	Cyanide (Cn)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max		1.10 11.20	3.20 44.50	1.50 5.60	1.10 1.60	1.70 1.70	0.70 0.70	3.10 3.10	1.20 3.90	1.00 1.00
36	Manganese (Mn)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max		- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max		7.60 26.00	8.50 13.00	7.60 9.00	7.50 12.00	0.00 0.00	7.00 7.00	9.50 9.50	8.50 12.00	9.00 10.50
39	Total Hardness (HAR _ Total)	Min Max		40.00 201.00	270.00 386.00	165.00 237.00	28.00 185.00	129.00 201.00	32.00 217.00	20.00 90.00	80.00 217.00	101.00 177.00
40	Na % (Sodium Percentage)	Min Max		17.00 42.00	38.00 50.00	26.00 37.00	14.00 49.00	30.00 48.00	15.00 34.00	12.00 23.00	20.00 27.00	14.00 24.00
41	SAR (Sodium Adsorption Ratio)	Min Max		0.40 1.50	2.50 3.90	1.00 1.90	0.30 1.10	1.10 2.80	0.40 1.20	0.30 0.30	0.50 1.10	0.40 0.80
42	RSC (Residual Sodium Carbonate)	Min Max		0.00 1.00	0.00 2.10	0.00 0.90	0.00 0.30	0.40 3.00	0.00 0.80	- -	0.00 0.70	0.00 0.30

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

contd...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery							
Sl. No.	Parameter	Site name	M. H. Halli	Thimmanahalli	Sakaleshpur	Chunchunkatte	Kudige
(1)	(2)	River/Stream	Hemavathi	Yagachi	Hemavathi	Cauvery	Cauvery
(1)	(2)	(3)	(34)	(35)	(36)	(37)	(38)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 489.00	0.57 85.61	0.97 487.70	0.00 707.10	3.64 1058.00
2	Temperature (°C)	Min Max	25.50 26.50	24.00 28.00	23.00 28.00	21.50 26.00	21.00 28.00
3	pH_GEN (Negative logarithm of hydrogen)	Min Max	6.90 7.90	7.10 8.10	6.30 7.60	7.30 8.20	7.20 7.80
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	1.10 3.80	1.80 7.30	1.00 4.80	0.70 3.20	0.50 3.40
6	Sodium (Na)	Min Max	3.50 9.50	10.30 21.50	3.60 7.80	2.10 15.10	2.30 6.70
7	Calcium (Ca)	Min Max	8.00 19.00	21.00 30.00	5.00 13.00	5.00 27.00	5.00 13.00
8	Magnesium (Mg)	Min Max	3.90 7.80	4.90 11.70	1.90 5.80	2.90 11.70	1.90 7.80
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.10	0.00 0.40	0.00 0.60	0.00 0.30	0.00 0.40
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	0.00 0.00	- -	- -
12	Carbonate (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
13	Bicarbonate (HCO ₃)	Min Max	34.00 84.00	89.00 136.00	18.00 58.00	21.00 151.00	17.00 65.00
14	Chloride (CL)	Min Max	7.80 19.50	23.80 40.10	5.30 17.80	5.30 15.60	6.00 15.30
15	Fluoride (F) (F)	Min Max	0.10 0.67	0.13 0.29	0.04 1.01	0.08 0.34	0.08 0.10
16	Sulphate (SO ₄)	Min Max	2.70 7.70	3.50 8.30	0.90 4.80	2.10 4.40	1.70 3.60
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.38 1.74	0.46 1.95	0.25 1.40	0.25 1.46	0.35 3.18
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.06	0.00 0.03	0.00 0.03	0.00 0.14	0.00 0.07
20	Phosphate (PO ₄)	Min Max	0.01 0.07	0.00 0.04	0.00 0.04	0.00 0.03	0.00 0.04
21	Silica (SiO ₂)	Min Max	4.90 15.50	5.80 16.20	3.30 17.20	4.10 18.20	4.90 11.00

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VI Basin : Cauvery							
Sl. No.	Parameter	Site name	M. H. Halli	Thimmanahalli	Sakaleshpur	Chunchunkatte	Kudige
(1)	(2)	River/Stream	Hemavathi	Yagachi	Hemavathi	Cauvery	Cauvery
(1)	(2)	(3)	(34)	(35)	(36)	(37)	(38)
22	DO (Dissolved Oxygen)	Min	3.10	-	4.10	-	5.40
		Max	6.10	-	6.30	-	6.90
23	BOD3-27 (Biochemical Oxygen Demand)	Min	0.20	-	1.20	-	0.40
		Max	1.00	-	2.60	-	1.80
24	Total Coliform (No. per 100 ml)	Min	-	-	-	-	-
		Max	-	-	-	-	-
25	Faecal Coliform (No. per 100 ml)	Min	-	-	-	-	-
		Max	-	-	-	-	-
26	Total plate count (No. per 100 ml)	Min	-	-	-	-	-
		Max	-	-	-	-	-
27	Phytoplankton (No. per ml)	Min	-	-	-	-	-
		Max	-	-	-	-	-
28	Zooplankton (No. per Litre)	Min	-	-	-	-	-
		Max	-	-	-	-	-
29	Arsenic (ppm) (As)	Min	-	-	-	-	-
		Max	-	-	-	-	-
30	Boron (ppm) (B)	Min	0.01	0.00	0.00	0.03	0.01
		Max	0.60	0.60	0.65	0.18	0.60
31	Cadmium (Cd)	Min	0.10	0.10	0.00	0.00	0.00
		Max	0.10	0.20	0.10	0.00	0.10
32	Chromium (Cr)	Min	0.20	3.10	0.70	0.30	0.20
		Max	0.80	4.90	19.70	0.30	0.60
33	Copper (Cu)	Min	3.90	2.00	1.30	1.50	6.20
		Max	4.30	4.50	2.30	1.50	17.70
34	Cyanide (Cn)	Min	-	-	-	-	-
		Max	-	-	-	-	-
35	Lead (Pb)	Min	0.30	0.80	0.50	0.90	0.70
		Max	5.50	1.10	2.20	0.90	2.10
36	Manganese (Mn)	Min	-	-	-	-	-
		Max	-	-	-	-	-
37	Mercury (Hg)	Min	-	-	-	-	-
		Max	-	-	-	-	-
38	Zinc (Zn)	Min	7.60	9.10	8.00	9.00	7.00
		Max	9.00	10.00	8.80	9.00	9.60
39	Total Hardness (HAR _ Total)	Min	36.00	88.00	20.00	24.00	20.00
		Max	80.00	109.00	1620.00	117.00	64.00
40	Na % (Sodium Percentage)	Min	14.00	19.00	20.00	14.00	16.00
		Max	25.00	32.00	30.00	23.00	20.00
41	SAR (Sodium Adsorption Ratio)	Min	0.30	0.50	0.30	0.20	0.20
		Max	0.50	1.00	0.50	0.60	0.40
42	RSC (Residual Sodium Carbonate)	Min	0.00	0.00	0.00	0.00	0.00
		Max	0.00	0.10	0.00	0.40	0.00

Source: Water Quality Year Book (Cauvery Basin) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.
2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VII Basin : Pennar							
Sl. No.	Parameter	Site name	Nellore	Nandipalli	Chennur	Kamalapuram	Alladupalli
		River/Stream	Pennar	Sagileru	Pennar	papagni	Kunderu
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Q(Cumecs) (Discharge in cubic m/s)	Min	0.00	0.00	0.00	↕ Dry Bed	0.00
		Max	26.46	2.00	956.90		1104.00
2	Temperature (°C)	Min	24.00	27.00	23.50		24.00
		Max	27.00	28.00	27.50		31.00
3	pH _L GEN (Negative logarithm of hydrogen ion concentration)	Min	7.50	8.10	7.60		7.50
		Max	9.30	8.20	8.40		8.20
4	Specific Conductance	Min	-	-	-		-
		Max	-	-	-		-
5	Potassium (K)	Min	3.20	5.00	2.70		2.60
		Max	6.60	5.00	6.60		7.00
6	Sodium (Na)	Min	75.80	90.50	64.20		58.00
		Max	106.50	91.40	258.00		250.50
7	Calcium (Ca)	Min	29.00	30.00	27.00		29.00
		Max	35.00	34.00	61.00		71.00
8	Magnesium (Mg)	Min	14.30	15.40	15.40		13.00
		Max	19.50	17.40	34.60		38.90
9	Aluminium (Al)	Min	-	-	-		-
		Max	-	-	-		-
10	Iron (Fe)	Min	-	0.00	0.00		0.00
		Max	-	0.00	0.10		0.00
11	Ammonia (NH ₃ -N)	Min	0.09	-	0.07		0.07
		Max	0.09	-	0.17		0.11
12	Carbonate (CO ₃)	Min	0.00	0.00	0.00		0.00
		Max	12.00	0.00	18.00		0.00
13	Bicarbonate (HCO ₃)	Min	128.00	171.00	134.00		140.00
		Max	199.00	171.00	262.00		311.00
14	Chloride (CL)	Min	100.10	119.10	85.10		76.60
		Max	141.80	119.60	334.70		331.30
15	Fluoride (F) (F)	Min	0.39	0.65	0.44		0.47
		Max	0.57	0.75	1.14		1.11
16	Sulphate (SO ₄)	Min	52.60	63.30	50.80		53.30
		Max	71.40	71.80	229.30		228.10
17	Sulphite (SO ₃)	Min	-	-	-		-
		Max	-	-	-		-
18	Nitrate (NO ₃ -N)	Min	0.83	1.26	0.29		0.58
		Max	2.30	2.22	3.58		5.10
19	Nitrite (NO ₂ -N)	Min	0.00	-	0.00		0.00
		Max	0.00	-	0.02		0.24
20	Phosphate (PO ₄)	Min	0.01	-	0.00		0.01
		Max	0.01	-	0.05		0.03
21	Silica (SiO ₂)	Min	-	-	-		-
		Max	-	-	-		-

Source: Water Quality Year Book (East Flowing Rivers from Mahanadi to Kanyakumari) , 2014-15

contd...

→ Dry Bed ←

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

VIII Basin : East Flowing Rivers From Mahanadi to Pennar

Sl. No.	Parameter	Site name River/Stream	Kashi Nagar Vamsadhara	Purushottampur Rushikulya	Srikakulam Nagavali	Marella Gundlakamma	Sl. No.	Parameter	Site name River/Stream	Kashi Nagar Vamsadhara	Purushottampur Rushikulya	Srikakulam Nagavali	Marella Gundlakamma
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	- -	- -	- -	0.00 277.00	22	DO (Dissolved Oxygen)	Min Max	- -	- -	- -	5.30 7.90
2	Temperature (°C)	Min Max	23.50 30.00	22.50 29.50	22.00 30.50	24.00 29.00	23	BOD3-27 (Biochemical Oxyg)	Min Max	- -	- -	- -	0.10 1.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.30 8.00	7.30 7.90	7.40 8.10	8.10 8.60	24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	1700.00 16000.00
4	Specific Conductance	Min Max	- -	- -	- -	- -	25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	2.00 16000.00
5	Potassium (K)	Min Max	2.10 2.60	1.80 5.20	1.20 5.20	2.50 14.00	26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -
6	Sodium (Na)	Min Max	14.80 22.90	17.10 19.50	1.90 20.90	97.50 175.00	27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -
7	Calcium (Ca)	Min Max	21.00 42.00	32.00 38.00	24.00 45.00	32.00 47.00	28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -
8	Magnesium (Mg)	Min Max	1.90 12.30	3.90 17.50	1.90 25.30	18.00 26.50	29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	30	Boron (ppm) (B)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.36
10	Iron (Fe)	Min Max	0.20 1.00	0.20 0.50	0.20 0.90	0.00 0.20	31	Cadmium (Cd)	Min Max	- -	- -	- -	1.24 1.24
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Min Max	- -	- -	- -	0.00 0.18	32	Chromium (Cr)	Min Max	- -	- -	- -	5.63 5.63
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 5.00	33	Copper (Cu)	Min Max	- -	- -	- -	2.19 2.19
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	76.00 181.00	101.00 163.00	120.00 146.00	107.00 356.00	34	Cyanide (Cn)	Min Max	- -	- -	- -	- -
14	Chloride (CL)	Min Max	10.30 22.60	13.20 31.10	17.00 26.40	75.50 127.90	35	Lead (Pb)	Min Max	- -	- -	- -	5.07 5.07
15	Fluoride (F) (F)	Min Max	0.05 0.05	0.05 0.05	0.05 0.05	0.90 1.42	36	Manganese (Mn)	Min Max	- -	- -	- -	- -
16	Sulphate (SO ₄)	Min Max	5.00 18.00	5.00 9.50	4.70 12.40	76.00 190.00	37	Mercury (Hg)	Min Max	- -	- -	- -	- -
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	38	Zinc (Zn)	Min Max	- -	- -	- -	3.00 3.00
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.78 2.63	0.73 13.13	0.63 1.37	0.22 1.20	39	Total Hardness (HAR _ Total)	Min Max	95.00 152.00	111.00 160.00	99.00 218.00	155.00 227.00
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	0.00 0.00	0.00 0.00	0.00 0.03	0.00 0.07	40	Na %	Min Max	22.00 32.00	20.00 27.00	3.00 27.00	52.00 70.00
20	Phosphate (PO ₄) (PO ₄)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.16 0.34	41	SAR	Min Max	0.60 1.00	0.60 0.80	0.10 0.80	3.00 6.10
21	Silica (SiO ₂)	Min Max	5.00 7.00	6.00 6.00	4.00 6.00	10.10 20.30	42	RSC	Min Max	0.00 0.30	0.00 0.30	0.00 0.30	0.00 2.20

Source: Water Quality Year Book (Rushikulya , Vamsadhara, Sarada & Nagavali Basins), 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IX Basin : East Flowing Rivers from Pennar to Kanyakumari													
Sl. No.	Parameter	Site name	Gummanur	Kudalaiyathur	Paramakudi	Theni	Ambasamudram	Murappanadu	A.P.Puram	Naidupeta	Sulurpet	Chengalpet	Vazhavachanur
(1)	(2)	River/Stream	Ponnaiyar	Vellar	Vaigai	Suruliyar	Vaigai	Thambraparani	Chittar	Swarnamukhi	Kalingi	Palar	Ponnaiyar
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 88.64	0.00 8.62	0.00 36.66	0.00 119.80	0.00 27.22	0.56 304.80	0.00 1.55	0.00 13.54	0.00 126.40	0.00 6.42	0.00 29.01
2	Temperature (°C)	Min Max	22.00 30.00	- -	25.00 27.00	23.00 27.00	24.00 26.00	25.00 29.50	24.50 27.00	25.50 28.00	26.00 30.00	25.00 25.00	26.50 32.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.40 8.60	7.80 7.80	7.30 7.80	7.00 8.60	7.50 8.60	7.10 8.40	7.40 8.40	7.60 8.20	7.80 8.00	7.90 7.90	7.70 8.60
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	16.20 22.40	2.90 2.90	5.20 9.60	2.00 3.70	2.60 3.60	2.00 7.40	5.20 11.70	3.00 3.80	2.80 3.10	7.80 7.80	3.80 8.50
6	Sodium (Na)	Min Max	88.00 146.50	50.20 50.20	18.70 20.00	6.60 14.40	6.60 17.10	10.60 29.00	39.90 389.00	60.70 81.80	62.90 63.90	57.50 57.50	69.50 165.00
7	Calcium (Ca)	Min Max	52.00 100.00	22.00 22.00	17.00 23.00	8.00 17.00	11.00 17.00	10.00 26.00	26.00 112.00	25.00 39.00	24.00 29.00	19.00 19.00	30.00 73.00
8	Magnesium (Mg)	Min Max	19.20 46.80	12.30 12.30	12.20 15.00	2.80 21.10	1.80 7.50	2.80 15.90	23.40 112.80	14.30 19.50	12.30 12.30	12.30 12.30	19.50 43.00
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.08	- -	- -	0.00 0.03	0.00 0.32	0.00 0.06	0.00 0.02	0.00 0.00	- 0.00	0.00 0.00	0.00 0.00
11	Ammonia (NH ₃ -N)	Min Max	0.06 0.44	- -	0.03 0.20	0.04 0.25	0.05 0.30	0.03 0.47	0.02 0.38	0.07 0.10	- -	- -	0.06 0.12
12	Carbonate (CO ₃)	Min Max	0.00 46.20	0.00 0.00	0.00 0.00	0.00 18.50	0.00 18.50	0.00 9.20	0.00 23.10	0.00 0.00	0.00 0.00	0.00 0.00	0.00 11.20
13	Bicarbonate (HCO ₃)	Min Max	206.00 408.00	128.00 128.00	122.00 127.00	28.00 145.00	9.00 80.00	46.00 136.00	122.00 418.00	146.00 207.00	146.00 159.00	104.00 104.00	146.00 336.00
14	Chloride (CL)	Min Max	119.80 199.50	72.30 72.30	26.20 28.20	11.10 22.50	9.40 24.50	15.00 46.80	76.80 677.70	86.20 116.30	83.40 83.40	80.60 80.60	111.20 252.40
15	Fluoride (F) (F)	Min Max	0.35 0.65	0.44 0.44	0.27 0.27	0.13 0.45	0.14 0.24	0.10 0.31	0.39 1.42	0.49 0.73	0.53 0.57	0.25 0.25	0.35 0.68
16	Sulphate (SO ₄)	Min Max	20.70 30.90	15.50 15.50	8.50 9.30	2.10 6.40	4.40 10.90	3.50 13.40	36.30 182.60	26.20 53.20	19.30 24.00	37.40 37.40	- -
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	6.13 28.60	1.50 1.50	1.84 3.47	0.16 1.69	0.76 1.81	0.04 2.24	2.22 5.56	1.01 3.34	1.59 6.32	1.43 1.43	1.01 5.35
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.03	- -	- -	0.00 0.01	0.00 0.00	0.00 0.07	0.01 0.02	0.00 0.00	- -	- -	0.00 0.00
20	Phosphate (PO ₄)	Min Max	1.15 2.10	- -	- -	0.00 0.04	0.00 0.09	0.00 0.05	0.00 0.03	0.00 0.01	- -	- -	0.00 0.06
21	Silica (Sio ₂)	Min Max	24.50 35.90	- -	- -	10.80 25.60	10.10 30.50	8.50 29.20	27.60 56.50	- -	- -	- -	- -

Source: Water Quality Year Book (East Flowing Rivers from Mahanadi to Kanyakumari) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

IX Basin : East Flowing Rivers from Pennar to Kanyakumari													
Sl. No.	Parameter	Site name River/Stream	Gummanur Ponnaiyar	Kudalaiyathur Vellar	Paramakudi Vaigai	Theni Suruliyar	Ambasamudram Vaigai	Murappanadu Thambraparan	A.P.Puram Chittar	Naidupeta Swarnamukhi	Sulurpet Kalingi	Chengalpet Palar	Vazhavachan r Ponnaiyar
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)	(12)	(13)	(14)	(15)
22	DO (Dissolved Oxygen)	Min Max	7.30 9.30	- -	5.10 7.60	5.90 9.40	6.20 7.60	5.20 6.40	- -	5.60 6.60	6.20 6.20	- -	4.20 7.30
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	3.00 5.50	1.80 1.80	3.90 3.90	0.80 2.40	0.40 2.90	0.40 2.50	0.80 0.80	1.10 1.60	2.20 2.40	1.50 1.50	0.60 2.70
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.00 0.20	- -	- -	0.00 0.06	0.08 0.08	0.00 0.00	0.08 0.59	- -	- -	- -	- -
31	Cadmium (Cd)	Min Max	0.06 1.16	- -	- -	0.09 1.28	0.53 0.53	0.03 1.21	0.49 15.07	2.24 2.24	- -	0.09 0.09	1.31 3.83
32	Chromium (Cr)	Min Max	1.12 49.91	- -	- -	0.90 8.82	1.24 1.24	1.39 6.12	2.08 14.33	0.16 0.16	- -	1.46 1.46	0.01 0.11
33	Copper (Cu)	Min Max	4.39 4.72	- -	- -	2.86 4.09	2.42 2.42	2.15 7.76	3.05 7.16	7.62 7.62	- -	3.34 3.34	3.21 5.67
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	1.70 1.98	- -	- -	1.80 1.92	1.01 1.01	1.74 11.52	1.87 8.31	0.05 0.05	- -	0.47 0.47	0.10 0.57
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	0.01 4.50	- -	- -	0.01 4.50	0.01 0.01	0.00 7.50	0.01 4.90	11.40 11.40	- -	4.00 4.00	4.00 10.80
39	Total Hardness (HAR _ Total)	Min Max	225.00 373.00	106.00 106.00	105.00 108.00	35.00 126.00	45.00 74.00	40.00 132.00	163.00 750.00	123.00 178.00	110.00 123.00	98.00 98.00	157.00 356.00
40	Na % (Sodium Percentage)	Min Max	43.00 50.00	50.00 50.00	26.00 28.00	19.00 31.00	22.00 43.00	30.00 39.00	34.00 60.00	48.00 57.00	52.00 55.00	54.00 54.00	47.00 66.00
41	SAR (Sodium Adsorption Ratio)	Min Max	2.60 3.70	2.10 2.10	0.80 0.80	0.40 0.70	0.40 1.10	0.70 1.10	1.40 7.20	2.30 3.10	2.50 2.70	2.50 2.50	2.40 5.10
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.10	0.00 0.00	0.00 0.00	0.20 0.20	0.00 0.00	0.00 0.00

Source: Water Quality Year Book (East Flowing Rivers from Mahanadi to Kanyakumari) , 2014-15

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Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.
2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

X Basin : Narmada												
Sl. No.	Parameter	Site name River/Stream	Chandwada Orsang	Garudeshwar Narmada	Pati Goi	Dhulsar Uri	Mandleshwar Narmada	Kogaon Kundi	Handia Narmada	Chhidgaon Ganjal	Hoshangabad Narmada	Sandia Narmada
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.32 1426.00	18.56 10016.00	0.83 733.80	0.43 1094.00	3.22 5048.00	0.76 3375.00	114.00 4909.00	- -	85.30 2739.00	75.02 4602.00
2	Temperature (°C)	Min Max	17.00 30.00	13.00 27.00	20.00 28.00	26.00 28.00	10.00 28.00	20.00 30.50	17.00 29.50	15.00 31.00	12.00 27.00	16.50 30.00
3	pH_GEN (Negative logarithm of hydrogen iron concentration)	Min Max	8.00 8.40	8.00 8.40	7.90 8.30	7.80 8.00	7.70 8.40	7.90 8.40	7.70 8.50	7.70 8.50	7.60 8.50	7.60 8.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	3.20 4.40	3.20 4.60	0.70 5.40	2.30 4.70	1.30 5.90	1.40 6.20	1.20 3.90	0.40 6.10	1.10 7.70	1.10 5.70
6	Sodium (Na)	Min Max	42.20 60.00	36.60 50.00	11.10 24.20	16.00 27.60	8.40 38.70	10.20 31.50	8.00 15.80	7.20 69.90	6.20 13.80	6.30 14.30
7	Calcium (Ca)	Min Max	26.00 47.00	28.00 34.00	27.00 45.00	17.00 37.00	24.00 34.00	16.00 35.00	23.00 34.00	21.00 65.00	22.00 33.00	23.00 37.00
8	Magnesium (Mg)	Min Max	6.10 19.00	0.90 14.40	18.20 29.20	19.20 28.90	8.50 12.90	14.80 30.40	9.50 15.60	9.50 44.50	8.80 18.00	9.70 38.30
9	Aluminium (Al)	Min Max	0.06 0.14	0.06 0.12	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Min Max	0.10 0.16	0.12 0.16	- -	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃) (CO ₃)	Min Max	4.00 18.00	5.00 14.00	0.00 6.20	0.00 0.00	0.00 5.20	0.00 9.10	0.00 13.00	0.00 12.10	0.00 10.40	0.00 7.80
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	92.00 180.00	49.00 210.00	160.00 218.00	166.00 222.00	135.00 208.00	163.00 222.00	132.00 197.00	131.00 567.00	133.00 191.00	133.00 228.00
14	Chloride (CL)	Min Max	63.00 97.00	52.00 90.00	8.80 25.60	18.40 26.20	6.10 56.0	12.70 26.80	5.10 10.20	4.00 23.10	4.60 9.10	4.30 8.80
15	Fluoride (F) (F)	Min Max	0.10 0.20	0.13 0.19	0.08 0.54	0.36 0.48	0.05 0.90	0.16 1.01	0.02 1.03	0.03 0.79	0.02 0.65	0.03 0.86
16	Sulphate (SO ₄)	Min Max	2.00 10.00	5.00 13.00	18.40 31.10	22.90 30.90	5.30 31.40	10.10 32.60	3.70 28.10	9.40 68.40	5.20 30.00	4.00 30.50
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.10 0.16	0.10 0.20	3.52 11.92	2.93 6.38	0.22 2.21	0.98 8.32	0.12 5.19	0.20 3.09	0.10 2.32	0.16 2.01
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	- -	- -	0.02 0.16	0.01 0.12	0.00 0.15	0.01 0.18	0.00 0.15	0.00 0.23	0.00 0.16	0.00 0.11
20	Phosphate (pO ₄) (PO ₄)	Min Max	0.10 0.24	0.13 0.20	0.12 0.73	0.09 0.46	0.06 0.54	0.03 0.58	0.02 0.67	0.03 0.51	0.01 0.86	0.05 0.48
21	Silica (SiO ₂)	Min Max	6.40 10.00	5.00 12.00	26.90 33.50	24.90 42.50	11.30 23.80	19.20 35.10	11.60 23.60	18.60 45.10	14.10 22.10	14.00 23.20

Source: Water Quality Year Book (Narmada Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

X Basin : Narmada												
Sl. No.	Parameter	Site name	Chandwada	Garudeshwar	Pati	Dhulsar	Mandleshwar	Kogaon	Handia	Chhidgaon	Hoshangabad	Sandia
(1)	(2)	River/Stream	Orsang	Narmada	Goi	Uri	Narmada	Kundi	Narmada	Ganjal	Narmada	Narmada
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	DO (Dissolved Oxygen)	Min Max	6.00 8.00	6.90 6.90	5.80 7.20	5.50 6.00	5.10 7.90	3.40 7.70	5.60 7.50	5.70 7.60	5.30 7.90	5.30 7.90
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.50 4.80	0.50 4.90	0.30 1.00	0.30 1.40	0.60 2.50	0.40 3.30	0.50 1.40	0.20 1.70	0.30 1.50	0.20 2.30
24	Total Coliform (No. per 100 ml)	Min Max	200.00 2500.00	700.00 1200.00	- -	- -	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	100.00 1200.00	300.00 600.00	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml) (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	100.00 197.00	72.00 142.00	150.00 204.00	151.00 187.00	103.00 137.00	127.00 203.00	110.00 143.00	104.00 347.00	97.00 144.00	99.00 239.00
40	Na % (Sodium Percentage)	Min Max	32.00 51.00	39.00 56.00	14.00 22.00	18.00 27.00	14.00 37.00	15.00 26.00	13.00 22.00	12.00 43.00	11.00 19.00	6.00 19.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.30 2.40	1.50 2.40	0.40 0.80	0.60 0.90	0.30 1.40	0.40 1.00	0.30 0.60	0.30 1.90	0.30 0.50	0.20 0.50
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.90	0.00 0.00	0.00 0.00	0.10 0.70	0.00 0.60	0.00 0.60	0.10 2.40	0.10 0.90	0.00 0.50

Source: Water Quality Year Book (Narmada Basin) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

X Basin : Narmada										
Sl. No.	Parameter	Site name River/Stream	Gadarwara Shakkar	Barman Narmada	Belkheri Sher	Patan Hiran	Bamni Banjar	Mohgaon Burhner	Manot Narmada	Dindori Narmada
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.18 554.40	18.80 4134.00	0.34 415.60	0.50 779.80	0.50 524.70	0.43 2149.00	0.62 3475.00	0.73 1922.00
2	Temperature (°C)	Min Max	17.00 29.00	18.00 30.00	20.00 31.00	19.00 30.50	15.00 30.00	18.50 30.50	16.50 30.50	14.00 31.00
3	pH_GEN (Negative logarithm of hydrogen iron concentration)	Min Max	7.30 8.50	7.50 8.20	7.40 8.20	7.10 8.80	7.20 8.10	7.40 8.30	6.70 8.40	7.70 8.30
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.70 6.30	1.10 6.10	0.70 4.00	3.20 13.20	1.30 5.40	0.80 4.30	0.50 5.50	0.70 3.60
6	Sodium (Na)	Min Max	6.60 17.70	4.10 15.60	4.20 19.90	6.50 50.10	4.10 14.20	3.60 14.40	2.60 15.30	3.20 57.80
7	Calcium (Ca)	Min Max	22.00 50.00	19.00 31.00	19.00 56.00	33.00 62.00	10.00 30.00	18.00 30.00	17.00 35.00	18.00 92.00
8	Magnesium (Mg)	Min Max	8.50 22.80	7.80 22.60	9.70 33.80	14.60 29.20	5.80 19.40	6.30 19.00	7.30 15.60	8.30 34.50
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 13.00	0.00 0.00	0.00 0.00	0.00 15.60	0.00 0.00	0.00 6.00	0.00 6.00	0.00 6.00
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	121.00 276.00	88.00 226.00	94.00 389.00	193.00 399.00	51.00 203.00	82.00 189.00	72.00 200.00	94.00 386.00
14	Chloride (CL)	Min Max	6.20 12.50	3.80 15.20	4.20 47.00	11.80 54.80	4.10 12.20	3.20 11.60	4.40 9.70	4.70 45.80
15	Fluoride (F) (F)	Min Max	0.04 1.01	0.02 0.47	0.05 0.56	0.05 1.10	0.06 0.54	0.03 0.39	0.02 0.45	0.02 0.43
16	Sulphate (SO ₄)	Min Max	4.10 46.60	1.20 40.80	2.20 15.20	4.30 32.30	6.50 28.20	1.00 26.40	2.10 88.00	3.60 67.30
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.07 4.62	0.12 2.80	0.36 1.63	0.89 6.48	0.12 1.44	0.10 1.38	0.08 1.53	0.04 14.19
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	0.00 0.15	0.00 0.14	0.00 0.14	0.00 1.46	0.00 0.14	0.00 0.14	0.00 0.14	0.00 0.14
20	Phosphate (pO ₄) (PO ₄)	Min Max	0.08 0.53	0.06 0.35	0.02 0.54	0.27 0.97	0.06 0.61	0.03 0.53	0.07 0.78	0.07 0.43
21	Silica (SiO ₂)	Min Max	14.50 27.30	11.60 28.90	11.90 41.50	13.50 24.50	10.40 25.90	13.30 32.00	16.30 38.40	16.30 27.30

Source: Water Quality Year Book (Narmada Basin) , 2014-15

Contd/...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

X Basin : Narmada											
Sl. No.	Parameter	Site name River/Stream	Gadarwara Shakkar	Barman Narmada	Belkheri Sher	Patan Hiran	Bamni Banjar	Mohgaon Burhner	Manot Narmada	Dindori Narmada	
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
22	DO (Dissolved Oxygen)	Min Max	4.80 8.20	3.50 7.80	4.90 7.90	2.10 7.70	4.40 7.40	3.60 7.60	4.70 7.50	3.00 7.70	
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.30 1.90	0.10 2.50	0.60 1.50	0.70 2.10	0.40 2.30	0.20 0.80	0.20 2.60	0.20 2.40	
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
27	Phytoplankton (No. per ml) (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	
39	Total Hardness (HAR _ Total)	Min Max	96.00 206.00	80.00 168.00	89.00 269.00	143.00 260.00	52.00 157.00	72.00 149.00	74.00 135.00	80.00 375.00	
40	Na % (Sodium Percentage)	Min Max	10.00 23.00	10.00 18.00	7.00 16.00	6.00 29.00	13.00 26.00	8.00 18.00	7.00 20.00	8.00 25.00	
41	SAR (Sodium Adsorption Ratio)	Min Max	0.30 0.70	0.20 0.50	0.20 0.60	0.20 1.40	0.20 0.70	0.20 0.50	0.10 0.60	0.20 1.30	
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 1.40	0.00 0.40	0.00 1.90	0.10 1.40	0.00 0.30	0.00 0.30	0.00 0.70	0.00 0.60	

Source: Water Quality Year Book (Narmada Basin) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XI Basin : Tapi										
Sl. No.	Parameter	Site name River/Stream	Burhanpur Tapi	Gopalkheda Purna	Sarangkheda Tapi	Mahuwa Purna	Gadat Ambika	Durvash Vaitarna	Pingalwada Dhadhar	Motinaroli Kim
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 8225.00	0.00 2743.00	0.00 10946.00	0.00 843.30	0.00 2086.00	0.00 2468.00	2.11 301.80	0.00 498.00
2	Temperature (°C)	Min Max	14.00 29.00	20.00 27.00	13.00 28.50	21.00 29.00	22.00 31.00	72.00 505.00	14.00 28.00	17.00 30.00
3	pH_GEN (Negative logarithm of hydrogen iron concentration)	Min Max	7.50 8.40	7.80 8.70	7.80 8.60	7.60 8.40	7.80 8.40	8.20 8.80	6.70 8.50	7.80 8.70
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	3.60 4.00	3.50 4.20	3.20 4.60	3.60 4.40	3.40 4.20	85.00 228.00	3.80 5.20	2.80 4.80
6	Sodium (Na)	Min Max	40.00 53.80	37.00 47.30	40.00 48.00	38.40 52.00	40.20 51.20	5.00 13.60	30.40 62.00	38.60 58.00
7	Calcium (Ca)	Min Max	30.00 43.00	24.00 52.00	24.00 38.00	31.00 44.00	30.00 43.00	85.00 204.00	32.00 56.00	27.00 48.00
8	Magnesium (Mg)	Min Max	3.70 26.00	7.30 17.30	5.00 31.10	2.40 17.40	6.10 15.50	3.00 4.80	2.90 28.20	3.70 32.80
9	Aluminium (Al)	Min Max	0.05 0.14	0.08 0.16	0.06 0.12	0.06 0.18	0.06 0.12	0.06 0.17	0.08 0.26	0.05 0.22
10	Iron (Fe)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Min Max	0.10 0.15	0.09 0.13	0.12 0.14	0.10 0.16	0.10 0.18	42.60 60.00	0.10 0.26	0.10 0.22
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 21.00	4.00 24.00	5.00 24.00	5.00 34.00	0.00 25.00	60.00 90.00	0.00 22.00	0.00 29.00
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	62.00 180.00	85.00 110.00	61.00 156.00	85.00 150.00	98.00 228.00	0.10 0.30	110.00 220.00	61.00 180.00
14	Chloride (CL)	Min Max	55.00 90.00	48.00 70.00	55.00 66.00	55.00 88.00	55.00 70.00	26.00 40.00	42.00 90.00	56.00 85.00
15	Fluoride (F) (F)	Min Max	0.10 0.35	0.10 0.14	0.05 0.20	0.08 0.24	0.12 0.28	0.00 12.00	0.10 0.40	0.10 0.30
16	Sulphate (SO ₄)	Min Max	5.00 18.00	3.00 18.00	2.00 16.40	3.00 12.00	4.00 14.00	4.00 16.20	6.10 16.60	6.00 18.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.10 0.16	0.10 0.14	0.10 0.13	0.10 0.18	0.12 0.20	0.06 0.10	0.10 0.21	0.10 0.14
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	0.04 0.10	0.05 0.10	0.05 0.10	0.05 0.08	0.05 0.08	0.19 0.23	0.06 0.12	0.04 0.10
20	Phosphate (pO ₄) (PO ₄)	Min Max	0.12 0.24	0.14 0.20	0.12 0.20	0.13 0.30	0.13 0.20	0.12 0.16	0.10 0.35	0.14 0.30
21	Silica (SiO ₂)	Min Max	8.00 11.60	6.80 10.00	6.60 10.00	6.80 12.20	6.80 8.60	0.12 0.24	6.80 10.00	5.80 12.00

Source: Water Quality Year Book (Tapi & Other West Flowing Rivers), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XI Basin : Tapi										
Sl. No.	Parameter	Site name River/Stream	Burhanpur Tapi	Gopalkheda Purna	Sarangkheda Tapi	Mahuwa Purna	Gadat Ambika	Durvash Vaitarna	Pingalwada Dhadhar	Motinaroli Kim
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
22	DO (Dissolved Oxygen)	Min Max	7.20 7.40	- -	6.40 9.60	6.00 9.40	7.80 9.60	36.00 64.00	0.50 6.80	6.10 8.10
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.50 4.80	1.40 3.80	1.60 4.00	0.50 4.40	1.20 4.70	- -	0.50 3.60	0.60 4.90
24	Total Coliform (No. per 100 ml)	Min Max	800.00 8000.00	500.00 1800.00	300.00 1800.00	300.00 2000.00	800.00 6800.00	800.00 5000.00	950.00 10000.00	600.00 4000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	300.00 3600.00	200.00 700.00	100.00 800.00	150.00 1000.00	500.00 3000.00	400.00 2400.00	400.00 4000.00	300.00 2000.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml) (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	90.00 216.00	91.00 201.00	95.00 194.00	100.00 156.00	120.00 172.00	65.00 100.00	112.00 236.00	101.00 223.00
40	Na % (Sodium Percentage)	Min Max	28.00 53.00	28.00 51.00	31.00 50.00	40.00 49.00	36.00 47.00	95.00 157.00	30.00 50.00	29.00 52.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.20 2.30	1.10 2.10	1.30 2.10	1.50 2.10	1.50 2.00	1.70 2.70	1.20 2.40	1.20 2.30
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.20	0.00 0.10	0.00 0.10	0.00 0.50	0.00 0.90	0.00 1.00	0.00 0.10	0.00 0.20

Source: Water Quality Year Book (Tapi & Other West Flowing Rivers), 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XII Basin : West Flowing Rivers from Tapi to Tadri						
Sl. No.	Parameter	Site name River/Stream	Badlapur Ulhas	Mangaon Kal	Belne Bridge Gad	Santeguli Aghanashini
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.91 4056.00	0.00 503.70	0.00 773.70	0.74 1955.00
2	Temperature (°C)	Min Max	20.00 33.00	25.00 27.50	24.00 25.00	22.00 27.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.10 7.90	6.90 7.40	7.10 7.30	6.80 7.80
4	Specific Conductance	Min Max	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.30 1.40	0.10 0.30	0.10 0.20	0.60 2.00
6	Sodium (Na)	Min Max	5.40 27.50	8.60 26.20	3.30 23.20	3.30 5.00
7	Calcium (Ca)	Min Max	13.00 29.00	8.00 21.00	13.00 27.00	3.00 6.00
8	Magnesium (Mg)	Min Max	1.90 10.70	3.90 6.80	1.98 5.80	1.00 2.90
9	Aluminium (Al)	Min Max	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 1.60	0.20 1.00	0.40 0.70	0.00 0.40
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Max Max	- -	- -	- -	- -
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	37.00 101.00	32.00 51.00	37.00 82.00	12.00 31.00
14	Chloride (CL)	Min Max	9.00 35.80	17.00 34.20	8.50 31.60	5.00 9.60
15	Fluoride (F) (F)	Min Max	0.21 0.36	0.21 0.23	0.19 0.25	0.04 0.11
16	Sulphate (SO ₄)	Min Max	7.50 32.60	12.20 17.80	7.90 15.20	1.60 2.70
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.14 0.96	0.27 0.73	0.22 0.40	0.32 0.56
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	0.00 0.03	0.00 0.01	0.00 0.01	0.00 0.01
20	Phosphate (pO ₄) (PO ₄)	Min Max	0.00 0.01	0.00 0.01	0.01 0.01	0.00 0.16
21	Silica (SiO ₂)	Min Max	1.50 47.80	2.20 30.80	0.40 25.50	0.30 6.30

Source: Water Quality Year Book (WTT) (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XII Basin : West Flowing Rivers from Tapi to Tadri						
Sl. No.	Parameter	Site name	Badlapur	Mangaon	Belne Bridge	Santeguli
(1)	(2)	River/Stream	Ulhas	Kal	Gad	Aghanashini
(1)	(2)	(3)	(4)	(5)	(6)	(7)
22	DO (Dissolved Oxygen)	Min Max	3.50 6.60	- -	- -	- -
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.50 3.20	0.60 7.90	0.60 3.90	- -
24	Total Coliform (No. per 100 ml)	Min Max	17000.00 920000.00	7900.00 79000.00	7900.00 35000.00	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	13000.00 350000.00	3300.00 17000.00	4900.00 24000.00	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -
27	Phytoplankton (No. per ml) (No. per ml)	Min Max	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	-0.50 -0.50	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.01 0.08	0.07 0.09	0.03 0.07	0.01 0.69
31	Cadmium (Cd)	Min Max	-0.01 0.04	- -	- -	0.10 0.20
32	Chromium (Cr)	Min Max	5.20 5.24	- -	- -	1.70 3.70
33	Copper (Cu)	Min Max	5.13 5.13	- -	- -	2.30 2.80
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -
35	Lead (Pb)	Min Max	3.59 10.00	- -	- -	0.30 1.30
36	Manganese (Mn)	Min Max	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	0.01 0.01	- -	- -	- -
38	Zinc (Zn)	Min Max	9.00 46.00	- -	- -	9.40 15.00
39	Total Hardness (HAR _ Total)	Min Max	40.00 92.00	44.00 68.00	40.00 92.00	12.00 28.00
40	Na % (Sodium Percentage)	Min Max	15.00 46.00	30.00 53.00	7.00 56.00	22.00 36.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.30 1.30	0.60 1.60	0.10 1.60	0.30 0.40
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

Source: Water Quality Year Book (WTT) (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.
2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari								
Sl. No.	Parameter	Site name	Haladi	Avershe	Yennehole	Addoor	Bantwal	Erinjipuzha
		River/Stream	Haladi	Sita	Yennehole	Gurpur	Nethravathi	Payaswani
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.16 965.00	0.00 943.80	0.00 792.50	0.00 1083.00	0.00 3949.00	0.01 1042.00
2	Temperature (°C)	Min Max	23.00 30.00	23.50 26.50	25.00 27.00	25.00 25.50	25.50 29.00	25.00 31.50
3	pH _{GEN} (Negative logarithm of hydrogen iron concentration)	Min Max	6.90 7.50	6.80 7.10	7.00 7.30	7.00 7.20	7.00 7.40	6.10 7.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.30 1.10	0.30 1.60	0.40 1.30	0.50 1.40	0.90 4.70	0.70 1.50
6	Sodium (Na)	Min Max	1.80 2.80	2.00 3.10	1.80 2.50	2.50 2.70	2.70 3.70	2.70 3.70
7	Calcium (Ca)	Min Max	2.00 3.00	2.00 3.00	2.00 3.00	2.00 3.00	2.00 4.00	3.00 8.00
8	Magnesium (Mg)	Min Max	0.50 1.50	1.00 1.50	1.00 1.50	1.50 1.90	0.10 1.90	1.00 5.70
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.10 0.10	0.00 0.10	0.00 0.10	0.00 0.10	0.00 0.20	0.00 0.00
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max	0.00 0.00	- -	0.00 0.00	0.00 0.00	0.00 0.00	- -
13	Bicarbonate (HCO ₃)	Min Max	10.00 14.00	7.00 14.00	10.00 13.00	10.00 12.00	12.00 17.00	13.00 29.00
14	Chloride (CL)	Min Max	2.80 5.00	2.80 5.00	2.80 3.90	3.90 6.00	5.00 6.00	4.30 9.90
15	Fluoride (F) (F)	Min Max	0.02 0.30	0.00 0.08	0.06 0.49	0.06 0.10	0.04 0.34	- -
16	Sulphate (SO ₄)	Min Max	1.20 2.20	1.80 2.20	1.60 3.10	2.10 2.40	1.80 3.10	1.10 3.60
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.20 0.43	0.20 0.34	0.08 0.32	0.35 0.38	0.25 0.31	- -
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.01	0.00 0.01	0.00 0.01	0.01 0.01	0.00 0.01	- -
20	Phosphate (PO ₄)	Min Max	0.00 0.04	0.00 0.02	0.00 0.04	0.01 0.02	0.01 0.04	- -
21	Silica (SiO ₂)	Min Max	0.10 5.00	3.90 6.70	3.80 15.40	5.50 6.60	3.10 4.00	- -

Source: Water Quality Year Book (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari								
Sl. No.	Parameter	Site name River/Stream	Haladi	Avershe	Yennehole	Addoor	Bantwal	Erinjipuzha
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
22	DO (Dissolved Oxygen)	Min Max	6.10 7.40	6.10 7.10	- -	- -	6.30 7.40	6.60 7.80
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.20 1.20	0.40 2.10	- -	- -	0.40 1.30	0.20 2.60
24	Total Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	0.01 0.63	0.01 0.16	0.01 0.19	0.00 0.16	0.00 0.04	- -
31	Cadmium (Cd)	Min Max	0.00 0.10	0.00 0.10	0.00 0.10	0.20 0.20	0.00 0.00	0.00 0.00
32	Chromium (Cr)	Min Max	0.00 10.50	2.00 4.80	0.20 0.30	22.20 22.20	0.30 0.30	0.50 0.50
33	Copper (Cu)	Min Max	0.60 11.80	5.00 9.10	2.30 4.80	6.40 6.40	3.10 3.10	2.40 2.40
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	0.80 4.70	0.20 1.00	0.70 0.80	3.40 3.40	1.50 1.50	0.30 0.30
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	16.30 23.00	10.30 12.00	9.30 12.00	11.00 11.00	8.00 8.00	13.80 13.80
39	Total Hardness (HAR _ Total)	Min Max	10.00 14.00	8.00 14.00	10.00 14.00	12.00 16.00	6.00 16.00	16.00 44.00
40	Na % (Sodium Percentage)	Min Max	22.00 36.00	22.00 37.00	23.00 30.00	23.00 32.00	25.00 40.00	15.00 28.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.20 0.40	0.20 0.40	0.20 0.30	0.30 0.30	0.30 0.70	0.20 0.30
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.10	0.00 0.00

Source: Water Quality Year Book (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanyakumari												
Sl. No.	Parameter	Site name	Perumannu	Kuttyadi	Kuniyil	Karathodu	Kumbidi	Pulamanthole	Mankara	Pudur	Ambarampalayam	Arangaly
(1)	(2)	(3)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.88 2006.00	1.10 431.60	0.00 1931.00	0.00 760.20	0.00 3363.00	0.00 690.80	0.00 459.20	0.01 183.00	0.95 94.87	1.59 639.90
2	Temperature (°C)	Min Max	23.50 30.00	25.00 30.00	23.00 33.00	24.00 29.50	26.00 29.00	26.00 34.50	26.50 31.00	22.50 29.50	24.50 27.50	25.00 29.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	6.50 7.20	7.10 7.80	5.90 7.30	6.80 7.50	6.70 7.20	6.90 7.60	7.10 7.80	7.10 7.90	7.40 8.90	6.90 7.40
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.70 1.50	0.50 0.70	0.80 2.00	1.30 3.20	2.00 4.10	1.50 2.10	2.00 7.00	2.70 7.80	2.10 7.10	1.00 1.60
6	Sodium (Na)	Min Max	2.00 3.80	1.70 4.30	3.50 6.00	3.60 6.70	7.00 9.70	3.00 4.50	4.70 18.50	10.00 20.00	9.00 29.40	2.50 3.20
7	Calcium (Ca)	Min Max	2.00 11.00	2.00 19.00	3.00 11.00	5.00 8.00	10.00 14.00	5.00 8.00	5.00 32.00	9.00 45.00	17.00 54.00	3.00 8.00
8	Magnesium (Mg)	Min Max	1.00 6.70	1.00 6.70	2.40 8.60	1.90 10.50	2.40 10.40	0.50 8.60	1.00 31.40	6.80 35.20	4.60 24.80	1.00 8.60
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	- -	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.10	0.00 0.00
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.02 0.26	- -
12	Carbonate (CO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.00 13.90	- -
13	Bicarbonate (HCO ₃)	Min Max	12.00 28.00	10.00 79.00	13.00 48.00	11.00 32.00	45.00 98.00	18.00 40.00	31.00 153.00	94.00 228.00	47.00 263.00	10.00 26.00
14	Chloride (CL)	Min Max	3.90 9.20	2.90 7.10	7.80 12.90	3.90 14.90	5.20 26.10	7.20 10.40	11.30 33.00	5.20 32.00	13.20 38.60	2.90 26.10
15	Fluoride (F) (F)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.25 0.91	- -
16	Sulphate (SO ₄)	Min Max	0.50 1.30	0.30 1.00	0.80 1.90	1.40 3.40	4.00 17.00	0.90 3.60	4.60 29.00	0.60 31.00	3.00 21.60	0.80 8.60
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.21 3.04	- -
19	Nitrite (NO ₂ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.00 0.08	- -
20	Phosphate (PO ₄)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.00 0.03	- -
21	Silica (SiO ₂)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	10.90 27.80	- -

Source: Water Quality Year Book (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

Contd./...

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanya Kumari

Sl. No.	Parameter	Site name River/Stream	Perumannu Valapatnam	Kuttyadi Kuttyadi	Kuniyil Chaliyar	Karathodu Kadalundi	Kumbidi Bharathapuzha	Pulamanthole Pulanthodu	Mankara Bharathapuzha	Podur Kannadipuzha	Ambarampalayam Aliyar	Arangaly Chalakudy
(1)	(2)	(3)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
22	DO (Dissolved Oxygen)	Min Max	6.20 7.80	7.20 8.60	6.60 8.60	5.60 7.80	6.00 7.00	7.00 7.20	4.80 7.00	5.00 6.60	5.40 7.40	6.20 7.60
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.10 1.40	0.20 1.20	0.20 1.20	0.20 1.40	0.20 1.60	0.20 1.20	0.20 1.80	0.20 2.20	0.80 6.60	0.20 1.20
24	Total Coliform (No. per 100 ml)	Min Max	1600.00 1600.00	1600.00 1600.00	1600.00 1600.00	1213.00 1213.00	1213.00 1213.00	763.00 763.00	1213.00 1213.00	763.00 763.00	- -	1213.00 1213.00
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	0.00 0.14	- -
31	Cadmium (Cd)	Min Max	0.10 0.10	0.10 0.10	0.00 0.00	- -	0.10 0.10	0.10 0.10	0.40 0.40	0.20 0.20	0.00 1.12	0.10 0.10
32	Chromium (Cr)	Min Max	0.30 0.30	3.70 3.70	0.70 0.70	- -	0.50 0.50	3.10 3.10	13.90 13.90	1.70 1.70	0.00 27.40	1.00 1.00
33	Copper (Cu)	Min Max	5.70 5.70	6.20 6.20	2.00 2.00	- -	10.10 10.10	5.50 5.50	3.00 3.00	8.50 8.50	0.01 1.22	12.30 12.30
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	10.60 10.60	4.70 4.70	0.30 0.30	- -	1.80 1.80	0.20 0.20	6.20 6.20	0.70 0.70	0.00 1.64	1.40 1.40
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	9.20 9.20	9.10 9.10	13.20 13.20	- -	9.70 9.70	9.50 9.50	9.00 9.00	9.30 9.30	0.01 4.50	9.60 9.60
39	Total Hardness (HAR _ Total)	Min Max	12.00 46.00	8.00 75.00	20.00 56.00	20.00 64.00	38.00 79.00	14.00 56.00	16.00 211.00	86.00 259.00	61.00 220.00	12.00 50.00
40	Na % (Sodium Percentage)	Min Max	15.00 26.00	16.00 53.00	14.00 38.00	18.00 26.00	24.00 27.00	14.00 30.00	16.00 20.00	14.00 20.00	20.00 28.00	10.00 24.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.20 0.30	0.20 0.70	0.30 0.60	0.30 0.40	0.50 0.50	0.30 0.40	0.30 0.60	0.50 0.50	0.50 0.90	0.20 0.30
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

Source: Water Quality Year Book (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanya Kumari												
Sl. No.	Parameter	Site name	Neeleswaram	Vandiperiyar	Ramamangalam	Kalampur	Kidangoor	Kallooppara	Malakkara	Thumpamon	Pattazhy	Ayilam
		River/Stream	Periyar	Periyar	Muvattupuzha	Kaliyar	Meenachil	Manimala	Pamba	Achankovil	Kallada	Vamanapuram
(1)	(2)	(3)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.69 1820.00	0.00 88.16	34.01 917.10	0.00 359.40	0.00 577.20	0.00 732.70	0.00 930.60	0.00 520.60	1.43 563.30	0.00 399.10
2	Temperature (°C)	Min Max	23.80 28.50	22.00 27.00	25.50 28.00	25.00 28.00	24.00 28.00	27.00 28.50	25.00 30.00	25.50 29.00	26.50 30.00	23.00 26.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.00 7.80	6.90 7.60	7.10 8.00	7.00 7.50	6.70 7.70	6.90 7.70	6.90 7.80	6.70 7.90	6.90 7.70	6.40 7.30
4	Specific Conductance	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5	Potassium (K)	Min Max	1.00 1.90	1.60 3.30	1.20 2.00	1.00 1.50	1.00 1.30	1.20 1.60	0.80 1.50	1.30 1.70	1.60 2.50	2.20 3.10
6	Sodium (Na)	Min Max	2.30 9.20	3.00 5.20	2.80 3.70	2.00 3.00	2.30 2.70	2.70 3.00	2.30 2.80	3.70 4.30	3.70 4.00	2.40 6.20
7	Calcium (Ca)	Min Max	2.00 8.00	5.00 8.00	3.00 9.00	2.00 22.00	3.00 6.00	3.00 7.00	2.00 6.00	3.00 8.00	3.00 6.00	2.00 7.00
8	Magnesium (Mg)	Min Max	1.00 2.90	1.90 13.30	0.50 15.20	1.00 8.60	1.00 5.70	0.50 2.90	1.00 3.80	1.00 7.60	1.00 3.80	1.00 7.60
9	Aluminium (Al)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Iron (Fe)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
11	Ammonia (NH ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
12	Carbonate (CO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
13	Bicarbonate (HCO ₃)	Min Max	13.00 29.00	15.00 37.00	6.00 26.00	10.00 18.00	11.00 37.00	11.00 21.00	12.00 21.00	16.00 32.00	13.00 18.00	8.00 32.00
14	Chloride (CL)	Min Max	3.90 7.80	6.50 12.80	2.90 10.70	1.40 7.80	4.30 13.00	1.40 8.50	2.90 10.40	5.70 13.00	1.40 11.30	2.90 13.50
15	Fluoride (F) (F)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
16	Sulphate (SO ₄)	Min Max	0.40 1.50	0.40 1.20	0.80 2.00	0.60 1.80	0.60 1.70	1.20 2.40	0.40 2.60	0.80 2.00	1.30 2.40	1.20 2.20
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
19	Nitrite (NO ₂ -N)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
20	Phosphate (PO ₄)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
21	Silica (SiO ₂)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Source: Water Quality Year Book (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIII Basin : West Flowing Rivers from Tadri to Kanya Kumari												
Sl. No.	Parameter	Site name	Neeleswaram	Vandiperiyar	Ramamangalam	Kalampur	Kidangoor	Kallooppara	Malakkara	Thumpamon	Pattazhy	Ayilam
		River/Stream	Periyar	Periyar	Muvattupuzha	Kaliyar	Meenachil	Manimala	Pamba	Achankovil	Kallada	Vamanapuram
(1)	(2)	(3)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
22	DO (Dissolved Oxygen)	Min Max	6.80 7.80	4.20 7.00	6.80 8.00	6.20 7.20	6.20 6.80	6.40 7.40	6.60 8.60	5.40 8.80	6.60 8.20	6.00 7.20
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.40 1.40	0.20 3.00	0.20 1.80	0.20 1.20	0.20 1.20	0.20 0.40	0.20 1.20	0.40 1.70	0.60 1.20	0.20 1.40
24	Total Coliform (No. per 100 ml)	Min Max	1600.00 1600.00	1600.00 1600.00	1600.00 1600.00	1213.00 1213.00	1600.00 1600.00	1600.00 1600.00	763.00 763.00	1213.00 1213.00	763.00 763.00	1213.00 1213.00
25	Faecal Coliform (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
27	Phytoplankton (No. per ml)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
31	Cadmium (Cd)	Min Max	0.20 0.20	0.80 0.80	0.60 0.60	0.10 0.10	0.10 0.10	0.10 0.10	0.00 0.00	0.00 0.00	0.50 0.50	0.20 0.20
32	Chromium (Cr)	Min Max	1.20 1.20	1.10 1.10	0.50 0.50	0.40 0.40	8.20 8.20	1.10 1.10	0.60 0.60	3.80 3.80	1.10 1.10	4.20 4.20
33	Copper (Cu)	Min Max	3.20 3.20	7.50 7.50	5.50 5.50	4.10 4.10	2.10 2.10	0.90 0.90	8.30 8.30	5.50 5.50	3.20 3.20	8.50 8.50
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35	Lead (Pb)	Min Max	0.90 0.90	21.90 21.90	0.30 0.30	2.30 2.30	0.90 0.90	8.50 8.50	0.50 0.50	0.20 0.20	12.10 12.10	0.50 0.50
36	Manganese (Mn)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	10.00 10.00	9.50 9.50	10.50 10.50	9.60 9.60	9.90 9.90	10.20 10.20	9.50 9.50	9.50 9.50	11.20 11.20	12.60 12.60
39	Total Hardness (HAR _ Total)	Min Max	12.00 31.00	20.00 73.00	12.00 86.00	8.00 90.00	12.00 38.00	12.00 30.00	12.00 32.00	16.00 50.00	12.00 32.00	8.00 50.00
40	Na % (Sodium Percentage)	Min Max	22.00 61.00	13.00 28.00	8.00 29.00	14.00 24.00	13.00 28.00	17.00 32.00	15.00 28.00	15.00 31.00	20.00 34.00	20.00 37.00
41	SAR (Sodium Adsorption Ratio)	Min Max	0.30 1.20	0.30 0.40	0.20 0.40	0.20 0.30	0.20 0.30	0.20 0.40	0.20 0.30	0.30 0.40	0.30 0.50	0.30 0.60
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

Source: Water Quality Year Book (West Flowing Rivers from Kanyakumari to Tapi), 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

KIV Basin : Mahi						
Sl. No.	Parameter	Site name	Mataji	Rangeli	Paderdibadi	Khanpur
		River/Stream	Mahi	Som	Mahi	Mahi
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 563.30	0.00 1717.00	0.00 519.60	8.48 4868.00
2	Temperature (°C)	Min Max	17.00 29.00	15.00 29.00	14.00 32.00	18.00 32.50
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	7.70 8.50	8.00 8.70	7.90 8.70	8.20 8.90
4	Specific Conductance	Min Max	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.60 0.90	0.60 1.10	0.70 1.00	0.70 1.00
6	Sodium (Na)	Min Max	7.10 38.30	15.40 48.70	11.20 41.40	14.40 26.80
7	Calcium (Ca)	Min Max	30.00 60.00	35.00 79.00	32.00 72.00	40.00 67.00
8	Magnesium (Mg)	Min Max	8.80 17.00	10.70 21.90	9.70 15.60	10.70 26.70
9	Aluminium (Al)	Min Max	0.03 0.04	0.02 0.06	0.02 0.04	0.02 2.00
10	Iron (Fe)	Min Max	0.30 0.40	0.30 0.50	0.40 0.60	0.20 0.40
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Max Max	0.05 0.85	0.15 0.97	0.05 0.85	0.08 0.89
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 12.00	0.00 17.00	0.00 17.00	0.00 17.00
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	93.00 181.00	137.00 259.00	132.00 234.00	137.00 195.00
14	Chloride (CL)	Min Max	10.00 56.00	22.00 64.00	16.00 62.00	22.00 42.00
15	Fluoride (F) (F)	Min Max	0.41 0.57	0.45 0.90	0.35 0.86	0.42 0.66
16	Sulphate (SO ₄)	Min Max	9.90 16.20	13.80 19.70	9.10 18.40	9.10 21.20
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.35 6.33	0.22 1.60	0.22 2.11	0.51 3.24
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	0.00 0.10	0.00 0.12	0.01 0.07	0.02 0.06
20	Phosphate (pO ₄) (PO ₄)	Min Max	0.05 0.08	0.07 0.10	0.08 0.11	0.05 0.07
21	Silica (SiO ₂)	Min Max	28.60 60.80	18.60 44.50	14.50 44.50	17.80 38.30

Source: Water Quality Year Book (Mahi, Sabarmati & Other Basins) , 2014-15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XIV Basin : Mahi						
Sl. No.	Parameter	Site name	Mataji	Rangeli	Paderdibadi	Khanpur
		River/Stream	Mahi	Som	Mahi	Mahi
(1)	(2)	(3)	(4)	(5)	(6)	(7)
22	DO (Dissolved Oxygen)	Min	5.40	4.20	5.50	5.80
		Max	10.20	8.00	13.80	11.50
23	BOD3-27 (Biochemical Oxygen Demand)	Min	0.80	1.70	1.90	0.40
		Max	3.30	3.80	8.80	4.10
24	Total Coliform (No. per 100 ml)	Min	70.00	76.00	79.00	212.00
		Max	42600.00	42600.00	49000.00	79000.00
25	Faecal Coliform (No. per 100 ml)	Min	2.00	2.00	2.00	2.00
		Max	8400.00	5800.00	7000.00	7600.00
26	Total plate count (No. per 100 ml)	Min	-	-	-	-
		Max	-	-	-	-
27	Phytoplankton (No.per ml)	Min	-	-	-	-
		Max	-	-	-	-
28	Zooplankton (No. per Litre)	Min	-	-	-	-
		Max	-	-	-	-
29	Arsenic (ppm) (As)	Min	-	-	-	-
		Max	-	-	-	-
30	Boron (ppm) (B)	Min	-	-	-	-
		Max	-	-	-	-
31	Cadmium (Cd)	Min	-	-	-	-
		Max	-	-	-	-
32	Chromium (Cr)	Min	-	-	-	-
		Max	-	-	-	-
33	Copper (Cu)	Min	-	-	-	-
		Max	-	-	-	-
34	Cyanide (Cn)	Min	-	-	-	-
		Max	-	-	-	-
35	Lead (Pb)	Min	-	-	-	-
		Max	-	-	-	-
36	Manganese (Mn)	Min	-	-	-	-
		Max	-	-	-	-
37	Mercury (Hg)	Min	-	-	-	-
		Max	-	-	-	-
38	Zinc (Zn)	Min	-	-	-	-
		Max	-	-	-	-
39	Total Hardness (HAR _ Total)	Min	117.00	133.00	121.00	161.00
		Max	193.00	257.00	241.00	226.00
40	Na % (Sodium Percentage)	Min	11.00	20.00	17.00	16.00
		Max	32.00	29.00	29.00	24.00
41	SAR (Sodium Adsorption Ratio)	Min	0.30	0.60	0.40	0.50
		Max	1.30	1.30	1.20	0.80
42	RSC (Residual Sodium Carbonate)	Min	0.00	0.00	0.00	0.00
		Max	0.00	0.00	0.00	.00

Source: Water Quality Year Book (Mahi, Sabarmati & Other Basins) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XV Basin : Sabarmati				
Sl. No.	Parameter	Site name	Derol Bridge	Vautha
		River/Stream	Sabarmati	Sabarmati
(1)	(2)	(3)	(4)	(5)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 205.20	8.34 1201.00
2	Temperature (°C)	Min Max	27.00 29.00	10.00 36.50
3	pH_ GEN (Negative logarithm of hydrogen iron concentration)	Min Max	8.30 8.50	7.90 8.50
4	Specific Conductance	Min Max	- -	- -
5	Potassium (K)	Min Max	0.70 1.00	2.30 13.50
6	Sodium (Na)	Min Max	38.30 76.80	36.20 368.20
7	Calcium (Ca)	Min Max	47.00 53.00	34.00 157.00
8	Magnesium (Mg)	Min Max	11.70 18.00	15.60 66.60
9	Aluminium (Al)	Min Max	0.02 0.03	0.03 0.10
10	Iron (Fe)	Min Max	0.20 0.20	0.20 0.70
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Min Max	0.16 0.88	0.83 40.20
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 12.00	0.00 34.00
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	171.00 200.00	122.00 649.00
14	Chloride (CL)	Min Max	50.00 110.00	48.00 502.00
15	Fluoride (F) (F)	Min Max	0.35 0.83	0.45 0.86
16	Sulphate (SO ₄)	Min Max	10.00 13.10	39.20 99.20
17	Sulphite (SO ₃)	Min Max	- -	- -
18	Nitrate (NO ₃ -N)	Min Max	0.17 1.71	0.68 4.31
19	Nitrite (NO ₂ -N)	Min Max	0.00 0.02	0.01 0.61
20	Phosphate (pO ₄)	Min Max	0.09 0.11	0.20 0.30
21	Silica (SiO ₂)	Min Max	16.50 25.30	16.20 47.10

Source: Water Quality Year Book (Mahi, Sabarmati & Other Basins) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

XV Basin : Sabarmati				
Sl. No.	Parameter	Site name	Derol Bridge	Vautha
		River/Stream	Sabarmati	Sabarmati
(1)	(2)	(3)	(4)	(5)
22	DO (Dissolved Oxygen)	Min Max	4.80 8.90	0.01 3.80
23	BOD3-27 (Biochemical Oxygen)	Min Max	0.40 1.90	4.50 54.00
24	Total Coliform (No. per 100 ml)	Min Max	10900.00 39000.00	3480.00 54200.00
25	Faecal Coliform (No. per 100 ml)	Min Max	400.00 4900.00	200.00 7900.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -
27	Phytoplankton (No.per ml) (No. per ml)	Min Max	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -
31	Cadmium (Cd)	Min Max	- -	- -
32	Chromium (Cr)	Min Max	- -	- -
33	Copper (Cu)	Min Max	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -
35	Lead (Pb)	Min Max	- -	- -
36	Manganese (Mn)	Min Max	- -	- -
37	Mercury (Hg)	Min Max	- -	- -
38	Zinc (Zn)	Min Max	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	177.00 193.00	149.00 648.00
40	Na % (Sodium Percentage)	Min Max	32.00 46.00	34.00 65.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.30 2.40	1.30 7.60
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.20

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XVI Basin : West Flowing River from Kutch & Saurashtra including Luni						
Sl. No.	Parameter	Site name River/Stream	Abu Road Banas	Kamalpur Banas	Chitrasani Balaram	Lowara Shetrunji
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Q(Cumecs) (Discharge in cubic m/s)	Min Max	0.00 7.35	0.00 172.80	0.00 9.33	0.00 340.90
2	Temperature (°C)	Min Max	20.00 29.00	21.70 29.00	18.00 27.50	12.00 28.00
3	pH_GEN (Negative logarithm of hydrogen ion concentration)	Min Max	8.20 8.40	8.50 8.70	8.20 8.50	8.20 8.40
4	Specific Conductance	Min Max	- -	- -	- -	- -
5	Potassium (K)	Min Max	0.80 0.80	0.70 0.70	0.70 0.90	0.90 9.00
6	Sodium (Na)	Min Max	48.70 243.40	13.30 15.40	34.10 61.20	10.20 3994.00
7	Calcium (Ca)	Min Max	42.00 68.00	30.00 37.00	46.00 64.00	19.00 409.00
8	Magnesium (Mg)	Min Max	8.80 34.50	8.80 9.70	11.70 34.00	10.70 193.20
9	Aluminium (Al)	Min Max	0.04 0.06	0.05 0.06	0.04 0.06	0.04 0.08
10	Iron (Fe)	Min Max	0.10 0.30	0.20 0.20	0.20 0.20	0.20 0.50
11	Ammonia (NH ₃ -N) (NH ₃ -N)	Min Max	0.17 0.77	0.77 0.77	0.08 0.17	0.33 3.04
12	Carbonate (CO ₃) (CO ₃)	Min Max	0.00 14.00	5.00 12.00	0.00 14.00	0.00 19.00
13	Bicarbonate (HCO ₃) (HCO ₃)	Min Max	127.00 244.00	78.00 122.00	181.00 268.00	68.00 1435.00
14	Chloride (CL)	Min Max	64.00 322.00	20.00 22.00	46.00 98.00	14.00 6000.00
15	Fluoride (F) (F)	Min Max	0.79 0.81	0.46 0.61	0.44 0.90	0.81 1.04
16	Sulphate (SO ₄)	Min Max	12.10 74.00	5.70 12.90	14.10 30.70	18.60 100.00
17	Sulphite (SO ₃)	Min Max	- -	- -	- -	- -
18	Nitrate (NO ₃ -N) (NO ₃ -N)	Min Max	0.69 4.18	1.95 2.57	0.34 0.98	0.20 3.69
19	Nitrite (NO ₂ -N) (NO ₂ -N)	Min Max	0.06 0.21	0.01 0.02	0.00 0.06	0.08 0.22
20	Phosphate (pO ₄) (PO ₄)	Min Max	0.10 0.13	0.08 0.09	0.05 0.07	0.05 0.16
21	Silica (SiO ₂)	Min Max	22.60 28.60	21.00 23.60	22.40 31.10	15.20 34.30

Source: Water Quality Year Book (Mahi, Sabarmati & Other Basins) , 2014-15

Contd.....

Table 13 : Maximum and minimum values of water quality parameters by site and river basin during 2014-15

XVI Basin : West Flowing River from Kutch & Saurashtra including Luni						
Sl. No.	Parameter	Site name River/Stream	Abu Road Banar	Kamalpur Banar	Chitrasani Balaram	Lowara Shetrunji
(1)	(2)	(3)	(4)	(5)	(6)	(7)
22	DO (Dissolved Oxygen)	Min Max	4.70 9.30	7.30 7.70	6.40 8.10	4.00 10.00
23	BOD3-27 (Biochemical Oxygen Demand)	Min Max	0.90 4.20	1.70 2.30	0.80 2.30	2.80 6.70
24	Total Coliform (No. per 100 ml)	Min Max	15000.00 49000.00	48000.00 48000.00	13000.00 22000.00	94.00 46000.00
25	Faecal Coliform (No. per 100 ml)	Min Max	2500.00 5800.00	4600.00 4600.00	580.00 4100.00	2.00 9400.00
26	Total plate count (No. per 100 ml)	Min Max	- -	- -	- -	- -
27	Phytoplankton (No.per ml) (No. per ml)	Min Max	- -	- -	- -	- -
28	Zooplankton (No. per Litre)	Min Max	- -	- -	- -	- -
29	Arsenic (ppm) (As)	Min Max	- -	- -	- -	- -
30	Boron (ppm) (B)	Min Max	- -	- -	- -	- -
31	Cadmium (Cd)	Min Max	- -	- -	- -	- -
32	Chromium (Cr)	Min Max	- -	- -	- -	- -
33	Copper (Cu)	Min Max	- -	- -	- -	- -
34	Cyanide (Cn)	Min Max	- -	- -	- -	- -
35	Lead (Pb)	Min Max	- -	- -	- -	- -
36	Manganese (Mn)	Min Max	- -	- -	- -	- -
37	Mercury (Hg)	Min Max	- -	- -	- -	- -
38	Zinc (Zn)	Min Max	- -	- -	- -	- -
39	Total Hardness (HAR _ Total)	Min Max	141.00 314.00	113.00 133.00	197.00 290.00	93.00 1241.00
40	Na % (Sodium Percentage)	Min Max	43.00 63.00	20.00 20.00	27.00 32.00	19.00 88.00
41	SAR (Sodium Adsorption Ratio)	Min Max	1.80 6.00	0.50 0.60	1.10 1.60	0.50 50.20
42	RSC (Residual Sodium Carbonate)	Min Max	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

Source: Water Quality Year Book (Mahi, Sabarmati & Other Basins) , 2014-15

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
I	Basin : Mahanadi										
i)	JHARKHAND										
1	Simdega	3639.71	145.66	151.85	41.49	17.98	15.04	41.27	36.07	0.14	36.20
	Sub Total	3639.71	145.66	151.85	41.49	17.98	15.04	41.27	36.07	0.14	36.20
ii)	ODISHA										
1	Anugul	6129.61	2060.53	1925.13	913.29	188.25	164.72	312.63	346.24	24.83	371.08
2	Balangir	6332.43	6332.43	6373.85	1543.85	700.00	690.00	750.00	2690.00	303.92	2993.92
3	Bargarh	5583.76	5583.76	5666.13	1216.13	660.00	430.00	600.00	2760.00	832.82	3592.82
4	Baudh	3006.39	3006.39	2997.17	1277.17	320.00	390.00	360.00	650.00	38.70	688.70
5	Cuttack	3802.97	3683.62	3756.20	763.17	900.81	406.82	435.88	1249.52	300.57	1550.09
6	Debagarh	2726.66	271.58	261.97	155.40	19.92	19.92	16.93	49.80	2.33	52.13
7	Dhenkanal	4310.65	660.17	691.87	266.11	79.64	85.76	101.08	159.27	13.41	172.68
8	Ganjam	8197.71	499.49	528.26	191.92	75.55	34.12	57.27	169.39	36.53	205.92
9	Jagatsinghapur	1678.55	1678.55	1832.92	132.92	490.00	220.00	110.00	880.00	419.77	1299.77
10	Jajapur	2792.19	41.71	47.88	10.83	8.07	4.03	5.23	19.72	4.50	24.22
11	Jharsuguda	2036.85	2036.85	1622.44	202.44	320.00	190.00	220.00	690.00	23.34	713.34
12	Kalahandi	7633.06	6570.09	6307.52	2184.57	697.20	456.19	869.35	2100.21	533.91	2634.12
13	Kandhamal	7770.03	5807.13	6285.30	4267.39	926.75	246.63	418.53	426.00	14.62	440.62
14	Kendrapara	2388.95	1292.70	1346.33	134.22	275.97	91.99	140.69	703.45	153.14	856.59
15	Khordha	2654.72	2462.32	2827.72	573.83	593.62	491.59	204.06	964.63	204.61	1169.24
16	Nabarangapur	5236.39	1655.37	1799.63	778.54	139.10	123.29	104.32	654.39	12.32	666.70
17	Nayagarh	3755.00	3458.66	3860.22	1916.74	525.02	267.11	239.48	911.87	354.75	1266.63
18	Nuapada	3728.43	3728.43	3869.69	1849.69	330.00	270.00	330.00	1090.00	121.68	1211.68
19	Puri	3433.02	3433.02	2857.10	137.10	590.00	440.00	450.00	1240.00	552.62	1792.62
20	Rayagada	7126.04	104.47	110.28	41.23	34.31	4.10	9.53	21.11	1.29	22.41
21	Sambalpur	6479.54	5266.85	5390.59	2952.06	398.29	390.16	422.68	1227.39	207.54	1434.93
22	Subarnapur	2271.97	2271.97	2155.78	415.78	300.00	190.00	200.00	1050.00	320.40	1370.40
23	Sundargarh	9353.52	3941.17	4402.05	2088.80	602.54	337.09	501.41	872.21	15.91	888.12
	Sub Total	108428.44	65847.26	66916.03	24013.20	9175.02	5943.54	6859.07	20925.20	4493.51	25418.71
iii)	MADHYA PRADESH										
1	Anuppur	3637.40	121.78	125.44	25.59	20.18	9.25	15.40	55.01	14.91	69.93
2	Balaghat	8897.36	0.10	0.10	0.06	0.01	0.01	0.00	0.03	0.01	0.04
3	Dindori	5543.20	27.29	17.67	1.25	1.93	1.49	3.12	9.88	4.42	14.30
4	Mandla	7201.48	2.50	3.35	2.06	0.19	0.15	0.17	0.78	0.35	1.13
	Sub Total	25279.44	151.67	146.57	28.96	22.31	10.90	18.70	65.70	19.70	85.40
iv)	CHHATISGARH										
1	Bastar	10152.59	347.86	134.34	28.46	15.94	22.79	7.78	59.38	1.96	61.34
2	Bilaspur	8022.86	7190.01	5214.48	1957.60	351.24	580.92	228.18	2096.53	511.65	2608.18
3	Dhamtari	3915.57	3903.65	4069.50	2035.15	318.56	230.10	24.86	1460.84	869.55	2330.39
4	Durg	8287.60	8256.76	2311.36	0.00	401.44	319.33	124.60	1465.98	431.30	1897.28
5	Jashpur	5583.19	3918.09	3134.60	625.90	270.94	342.39	89.52	1805.85	203.45	2009.30
6	Janjgir-Champa	3723.65	3723.65	6457.41	2279.67	783.61	518.19	448.74	2427.20	137.60	2564.80
7	Kabeerddham	4061.73	3465.32	3794.06	1616.23	228.47	278.17	82.75	1588.44	695.58	2284.01
8	Korba	6333.50	6333.17	7145.07	4715.05	593.30	361.63	166.44	1308.64	102.07	1410.72
9	Koriya	6383.21	2478.01	2320.59	1545.13	141.25	128.56	95.21	410.44	49.40	459.84
10	Mahasamund	4559.96	4559.96	4963.01	1406.02	436.63	357.50	83.09	2679.77	351.45	3031.22
11	Raigarh	6819.11	6818.53	6527.19	2073.71	715.05	694.06	501.54	2542.82	327.03	2869.86
12	Raipur	11995.63	11995.63	2914.37	29.40	470.83	567.51	205.50	1641.13	610.64	2251.77
13	Rajnandgaon	7764.54	5467.60	5649.26	1821.54	485.36	546.74	375.15	2420.48	726.91	3147.38
14	Surguja	15125.37	2477.40	822.20	393.82	49.78	75.12	42.78	260.70	38.39	299.09
15	Kanker	6567.07	2278.90	2232.26	965.77	175.18	255.73	98.07	737.52	64.23	801.75
	Sub Total	109295.58	73214.54	57689.70	21493.46	5437.57	5278.74	2574.21	22905.72	5121.22	28026.94
v)	MAHARASHTRA										
1	Gadchiroli	13966.06	298.56	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
2	Gondiya	5273.77	23.83	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Sub Total	19239.83	322.39	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Grand Total	265883.00	139681.52	124904.14	45577.10	14652.88	11248.22	9493.25	43932.69	9634.57	53567.26

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
II Basin : Subarnarekha & Bhurhabalang											
i)	JHARKHAND										
1	Bokaro	2688.22	17.01	18.29	4.69	4.51	1.32	5.61	2.16	0.31	2.47
2	Khunti	2603.07	1297.28	1301.17	226.93	188.61	72.90	502.34	310.39	77.24	387.63
3	Pashchimi Singhbhum	6941.29	2687.33	2198.13	551.06	391.64	178.91	640.65	435.87	66.36	502.24
4	Purbi Singhbhum	3433.65	3119.28	5057.28	1134.16	1684.37	434.36	1123.76	680.63	65.39	746.02
5	Ramgarh	1259.52	136.64	151.88	45.86	33.54	5.39	58.65	8.44	8.60	17.03
6	Ranchi	4743.84	2802.26	2937.66	588.26	410.75	148.17	1101.86	688.63	27.93	716.56
7	Saraikela Kharsawan	2546.17	2536.09	2362.92	647.15	378.85	178.36	523.54	635.02	100.02	735.04
	Sub Total	24215.76	12595.89	14027.33	3198.11	3092.26	1019.41	3956.41	2761.14	345.85	3107.00
ii)	ODISHA										
1	Baleshwar	3733.69	2644.77	2636.64	235.32	495.85	325.84	198.34	1381.29	236.35	1617.64
2	Mayurbhanj	10035.64	7146.63	7592.77	3127.75	640.91	790.46	769.10	2264.56	57.44	2322.00
	Sub Total	13769.33	9791.40	10229.41	3363.07	1136.76	1116.30	967.43	3645.85	293.79	3939.63
iii)	WEST BENGAL										
1	Pashchim Medinipur	9021.98	2387.68	2457.50	455.03	429.03	20.57	184.63	1368.25	1301.84	2670.09
2	Purba Medinipur	3893.57	85.26	86.84	0.20	22.88	0.43	0.17	63.17	55.67	118.84
3	Puruliya	6003.10	931.92	971.25	116.50	176.81	13.81	184.74	479.39	66.15	545.54
	Sub Total	18918.65	3404.86	3515.60	571.73	628.71	34.80	369.54	1910.81	1423.66	3334.47
	Grand Total	56903.74	25792.15	27772.33	7132.90	4857.73	2170.51	5293.38	8317.80	2063.30	10381.10
III Basin : Brahmani and Baitarni											
i)	JHARKHAND										
1	Gumla	5149.51	4312.74	4474.94	1133.49	503.74	292.78	1500.76	1044.17	1.06	1045.22
2	Khunti	2603.07	1305.80	1309.72	228.42	189.85	73.38	505.64	312.43	77.75	390.18
3	Latehar	4092.97	11.85	11.10	5.65	1.07	0.52	2.66	1.20	0.36	1.57
4	Lohardaga	1439.38	911.85	973.19	280.99	125.65	59.72	255.21	251.63	66.35	317.98
5	Pashchimi Singhbhum	6941.29	4253.95	3479.56	872.30	619.95	283.21	1014.12	689.97	105.05	795.02
6	Ranchi	4743.84	1150.39	1205.98	241.49	168.62	60.83	452.34	282.70	11.47	294.16
7	Simdega	3639.71	3494.05	3642.49	995.25	431.31	360.82	989.96	865.15	3.31	868.47
	Sub Total	28609.77	15440.63	15096.98	3757.59	2040.19	1131.26	4720.68	3447.25	265.35	3712.60
ii)	CHHATISGARH										
1	Jashpur	5583.19	1205.37	1394.11	492.16	169.18	111.87	96.88	524.01	29.71	553.72
2	Surguja	15125.37	158.79	52.70	25.24	3.19	4.81	2.74	16.71	2.46	19.17
	Sub Total	20708.56	1364.16	1446.81	517.41	172.37	116.69	99.62	540.72	32.17	572.89
iii)	ODISHA										
1	Anugul	6129.61	4069.08	3801.69	1803.53	371.75	325.28	617.37	683.76	49.04	732.79
2	Baleshwar	3733.69	1081.10	1077.78	96.19	202.69	133.19	81.07	564.63	96.61	661.24
3	Bhadrak	2390.28	2390.28	2467.07	97.07	360.00	260.00	150.00	1600.00	126.81	1726.81
4	Cuttack	3802.97	119.34	121.69	24.72	29.18	13.18	14.12	40.48	9.74	50.22
5	Debagarh	2706.30	2434.72	2366.28	1403.65	179.93	179.93	152.94	449.82	21.03	470.86
6	Dhenkanal	4310.65	3650.47	3825.74	1471.50	440.36	474.24	558.92	880.72	74.14	954.86
7	Jajapur	2792.19	2750.48	3157.39	714.44	531.93	265.97	344.77	1300.28	296.60	1596.88
8	Kendrapara	2388.95	1096.25	1141.73	113.83	234.03	78.01	119.31	596.55	129.87	726.42
9	Kendujhar	7996.91	7996.91	8337.18	3097.18	1640.00	660.00	1130.00	1810.00	63.22	1873.22
10	Mayurbhanj	10035.64	2889.01	3069.36	1264.38	259.09	319.54	310.91	915.44	23.22	938.66
11	Sambalpur	6479.54	1212.69	1241.18	679.71	91.71	89.84	97.32	282.61	47.78	330.39
12	Sundargarh	9353.52	5412.35	6045.27	2868.52	827.46	462.91	688.59	1197.79	21.86	1219.65
	Sub Total	62120.25	35102.68	36652.35	13634.73	5168.13	3262.09	4265.32	10322.08	959.92	11282.01
	Grand Total	111438.58	51907.47	53196.14	17909.73	7380.69	4510.04	9085.62	14310.06	1257.44	15567.50

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
IV	Basin : Godavari										
i)	ANDHRA PRADESH										
1	East Godavari	10571.11	5889.31	7020.51	2458.60	1336.77	263.94	535.53	2425.66	1384.21	3809.87
2	Visakhapatnam	11115.36	3614.27	3629.11	1434.50	781.25	149.62	353.32	910.43	269.40	1179.83
3	West Godavari	7582.74	1682.39	1887.38	294.87	358.22	84.39	110.92	1038.98	494.39	1533.37
	Sub Total	29269.21	11185.97	12537.00	4187.97	2476.24	497.95	999.76	4375.07	2148.00	6523.08
ii)	TELANGANA										
1	Adilabad	15526.99	15526.99	16105.00	6895.17	1057.06	415.35	2159.78	5577.64	432.83	6010.47
2	Karimnagar	11539.77	11530.94	11813.95	2502.18	1920.65	762.48	1522.43	5106.21	1884.62	6990.83
3	Khammam	15646.02	9996.76	8476.15	3556.83	1264.98	434.16	626.40	2593.78	299.49	2893.27
4	Medak	9489.96	9128.93	9330.98	879.13	1235.55	494.05	2174.72	4547.53	768.52	5316.04
5	Nizamabad	7674.38	7674.38	7956.00	1693.43	1445.66	338.44	1578.10	2900.37	1596.60	4496.97
6	Rangareddy	7358.88	505.32	514.53	50.18	96.39	43.22	167.23	157.50	17.81	175.31
7	Warangal	12447.42	6248.20	6448.27	1862.37	620.53	532.65	1121.05	2311.68	680.08	2991.76
	Sub Total	79683.42	60611.52	60644.88	17439.30	7640.82	3020.35	9349.72	23194.71	5679.95	28874.65
iii)	KARNATAKA										
1	Bidar	5293.88	4469.12	4573.61	233.90	353.68	374.35	973.94	2637.73	466.41	3104.13
2	Gulbarga	10687.27	0.18	0.18	0.01	0.01	0.01	0.01	0.15	0.03	0.18
	Sub Total	15981.15	4469.30	4573.79	233.91	353.69	374.36	973.95	2637.88	466.43	3104.31
iv)	MADHYA PRADESH										
1	Balaghat	8897.36	6686.72	6947.99	3795.86	432.25	393.36	246.81	2079.70	522.59	2602.29
2	Betul	9690.38	2129.74	2214.93	873.38	159.99	146.28	88.09	947.20	388.22	1335.42
3	Chhindwara	11361.38	7972.16	8314.48	3349.75	516.13	580.73	288.50	3579.37	1509.09	5088.46
4	Mandla	7201.48	709.24	950.93	584.34	52.98	43.51	48.77	221.33	100.24	321.57
5	Seoni	8422.70	6269.58	6516.20	2445.38	458.49	382.89	261.11	2968.32	1333.27	4301.59
	Sub Total	45573.30	23767.44	24944.52	11048.71	1619.84	1546.78	933.28	9795.92	3853.42	13649.33
v)	CHHATISGARH										
1	Bastar	10152.59	9804.73	3786.58	802.22	449.16	642.38	219.24	1673.57	55.27	1728.84
2	Bijapur	8511.40	8511.40	6552.96	4944.88	252.45	519.23	176.74	659.66	0.83	660.49
3	Dantewada	8466.39	8466.39	3410.50	1490.14	384.97	306.30	203.12	1025.97	18.46	1044.43
4	Dhamtari	3915.57	11.93	12.44	6.22	0.97	0.70	0.08	4.46	2.66	7.12
5	Durg	8287.60	30.84	8.63	0.00	1.50	1.19	0.47	5.48	1.61	7.09
6	Narayanpur	4131.46	4131.46	6922.68	6384.94	49.78	103.18	54.69	330.09	5.90	335.99
7	Rajnandgaon	7764.54	2218.36	2292.07	739.05	196.92	221.83	152.21	982.06	294.93	1276.98
8	Kanker	6567.07	4288.17	4200.42	1817.27	329.62	481.21	184.54	1387.78	120.87	1508.65
	Sub Total	57796.62	37463.28	27186.27	16184.71	1665.39	2276.02	991.08	6069.07	500.52	6569.59
vi)	MAHARASHTRA										
1	Ahmadnagar	16510.41	10368.10	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
2	Akola	5214.95	0.23	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
3	Amravati	11765.11	4020.91	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
4	Aurangabad	9772.28	8725.44	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
5	Bhandara	3719.41	3719.41	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
6	Bid	10244.73	8798.17	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
7	Buldana	9409.67	3796.29	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
8	Chandrapur	10917.27	10917.27	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
9	Gadchiroli	13966.06	13667.51	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
10	Gondiya	5273.77	5249.95	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
11	Hingoli	4514.84	4514.84	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
12	Jalgaon	11349.74	15.66	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
13	Jalna	7510.09	7386.59	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
14	Latur	7009.52	7007.07	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
15	Nagpur	9564.49	9564.49	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
16	Nanded	10260.74	10260.74	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
17	Nashik	15021.09	6973.25	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
18	Osmanabad	7347.20	2980.50	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19	Parbhani	6154.98	6154.98	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
20	Pune	15185.75	81.25	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
21	Thane	9208.22	3.10	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
22	Wardha	6084.96	6084.96	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
23	Washim	5017.05	3960.73	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
24	Yavatmal	13069.20	13069.20	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Sub Total	224091.53	147320.64	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
vii)	ODISHA										
1	Kalahandi	7633.06	417.57	400.88	138.84	44.31	28.99	55.25	133.48	33.93	167.41
2	Koraput	8180.27	6693.33	5841.77	1537.89	1562.82	564.58	605.49	1571.00	264.76	1835.76
3	Malkangiri	5650.92	5650.92	6035.88	3355.88	760.00	290.00	380.00	1250.00	25.02	1275.02
4	Nabarangapur	5236.39	3581.02	3893.10	1684.19	300.90	266.71	225.68	1415.62	26.64	1442.26
5	Rayagada	7126.04	871.13	919.57	343.80	286.06	34.23	79.46	176.03	10.80	186.83
	Sub Total	33826.68	17213.97	17091.20	7060.60	2954.09	1184.51	1345.88	4546.13	361.16	4907.29
viii)	PUDUCHERRY										
1	Yanam	36.94	36.94	23.91	0.00	12.37	4.43	0.69	6.42	2.99	9.41
	Sub Total	36.94	36.94	23.91	0.00	12.37	4.43	0.69	6.42	2.99	9.41
	Grand Total	486258.85	302069.06	147001.58	56155.20	16722.43	8904.40	14594.36	50625.20	13012.47	63637.66

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
V	Basin : Krishna										
i)	ANDHRA PRADESH										
1	Anantapur	18987.72	4185.59	4216.95	434.21	697.83	140.63	985.94	1958.35	118.85	2077.20
2	Guntur	11186.51	6545.38	6665.03	947.54	1127.78	393.82	546.22	3649.67	1087.84	4737.51
3	Krishna	8365.25	4686.80	4889.48	426.85	1060.99	235.78	444.98	2720.88	1072.14	3793.02
4	Kurnool	17503.31	9696.79	9782.49	1887.30	1497.27	279.96	1043.19	5074.77	453.90	5528.67
5	Prakasam	17389.37	657.16	666.10	173.57	126.94	45.69	97.94	221.96	6.74	228.70
	Sub Total	73432.16	25771.72	26220.05	3869.47	4510.81	1095.88	3118.27	13625.62	2739.47	16365.10
ii)	TELANGANA										
1	Hyderabad	173.43	173.43	217.00	0.00	217.00	0.00	0.00	0.00	0.00	0.00
2	Karimnagar	11539.77	8.83	9.05	1.92	1.47	0.58	1.17	3.91	1.44	5.35
3	Khammam	15646.02	4864.63	4124.67	1730.83	615.56	211.27	304.82	1262.19	145.74	1407.93
4	Mahbubnagar	17974.02	17974.02	18432.00	2555.96	1877.25	525.05	4813.70	8660.04	1122.83	9782.87
5	Medak	9489.96	361.03	369.02	34.77	48.86	19.54	86.01	179.85	30.39	210.24
6	Nalgonda	13742.14	13742.14	14240.00	830.73	2496.96	1007.36	4073.21	5831.74	1467.44	7299.18
7	Rangareddy	7358.88	6853.56	6978.47	680.57	1307.39	586.18	2268.15	2136.19	241.52	2377.71
8	Warangal	12447.42	6199.23	6397.74	1847.77	615.66	528.47	1112.26	2293.56	674.75	2968.31
	Sub Total	88371.64	50176.87	50767.94	7682.55	7180.16	2878.46	12659.31	20367.47	3684.12	24051.59
iii)	KARNATAKA										
1	Bagalkot	6432.04	6432.04	6588.77	811.26	536.42	57.38	485.12	4698.59	995.77	5694.36
2	Belgaum	13120.75	12113.73	12412.00	1758.09	1054.09	364.08	2541.27	6694.47	2768.23	9462.69
3	Bellary	8311.09	8311.09	8131.96	970.17	1637.68	339.17	953.80	4231.14	1257.05	5488.19
4	Bidar	5293.88	824.76	844.04	43.17	65.27	69.09	179.74	486.78	86.07	572.86
5	Bijapur	10261.00	10261.00	10534.71	19.77	652.92	163.93	1397.25	8300.84	848.00	9148.84
6	Chikmagalur	7167.73	6264.50	6310.84	1765.70	627.02	1115.92	192.96	2609.24	516.23	3125.47
7	Chitradurga	8360.22	8360.22	7707.02	737.19	766.46	1216.69	1035.01	3951.67	1052.27	5003.94
8	Dakshina Kannada	4578.68	1.09	1.14	0.31	0.30	0.16	0.03	0.34	0.06	0.40
9	Davanagere	5875.62	5875.62	5975.97	899.18	603.25	330.18	211.90	3931.46	876.59	4808.05
10	Dharwad	4202.26	2780.03	2827.02	233.10	182.63	42.62	167.57	2201.10	864.86	3065.96
11	Gadag	4563.79	4563.79	4657.15	326.14	221.09	38.60	295.97	3775.35	1607.11	5382.46
12	Gulbarga	10687.27	10687.08	10941.01	353.15	749.21	364.02	552.53	8922.09	1570.65	10492.74
13	Hassan	6789.18	1384.62	1351.34	119.87	224.76	110.23	146.06	750.42	166.00	916.42
14	Haveri	4743.98	4623.62	4728.47	462.50	381.08	170.44	185.84	3528.61	651.57	4180.17
15	Koppal	5468.71	5468.71	5524.95	294.51	572.18	174.53	405.27	4078.46	925.80	5004.26
16	Raichur	8276.99	8276.99	8358.43	181.67	406.47	442.12	2578.28	4749.89	907.61	5657.50
17	Shimoga	8361.30	5694.09	5773.45	1885.40	694.76	1407.24	230.57	1555.48	241.80	1797.28
18	Tumkur	10543.89	3897.56	3935.88	167.00	565.58	591.91	688.45	1922.93	293.36	2216.30
19	Udupi	3841.79	3.06	2.84	0.80	0.43	0.73	0.11	0.77	0.12	0.89
20	Uttara Kannada	10048.65	664.06	677.15	537.66	33.57	18.43	13.49	74.00	6.92	80.92
21	Yadgir	5163.02	5163.02	5160.88	337.73	575.77	148.77	1103.25	2995.36	740.81	3736.17
	Sub Total	152091.84	111650.68	112445.03	11904.35	10550.96	7166.25	13364.47	69459.00	16376.87	85835.87
iv)	MAHARASHTRA										
1	Ahmadnagar	16510.41	6130.16	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
2	Bid	10244.73	1446.56	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
3	Kolhapur	7500.31	7237.44	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
4	Latur	7009.52	2.45	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
5	Osmanabad	7347.20	4366.70	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
6	Pune	15185.75	14790.56	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
7	Raigarh	6942.67	2.53	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
8	Ratnagiri	8050.94	14.49	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
9	Sangli	8349.99	8346.19	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
10	Satara	10223.37	10187.31	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
11	Sindhudurg	4966.78	124.14	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
12	Solapur	14495.87	14495.87	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
13	Thane	9208.22	2.55	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Sub Total	126035.76	67146.95	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Grand Total	439931.40	254746.22	189433.02	23456.37	22241.92	11140.59	29142.05	103452.10	22800.47	126252.56

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Note : (1) Totals may not tally due to rounding off.

Note : (2) N.A.: Not available data.

Note : (3) Estimated on the basis of the percentage of the area of each district, within the basin, to the district as a whole.

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(Area in Sq.Km)

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					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
VI	Basin : Cauvery										
i)	KARNATAKA										
1	Bangalore Urban	2175.82	987.82	987.04	22.95	587.83	78.14	110.07	188.06	17.95	206.01
2	Bangalore Rural	2294.62	978.92	979.16	48.30	235.06	90.89	143.72	461.18	16.08	477.27
3	Chamarajanagar	5688.19	5688.19	5699.01	2756.10	460.61	351.28	596.64	1534.38	375.86	1910.24
4	Chikkaballapura	4188.56	6.40	6.18	0.76	1.02	1.02	0.36	3.02	0.23	3.25
5	Chikmagalur	7167.73	751.01	756.57	211.68	75.17	133.78	23.13	312.81	61.89	374.69
6	Hassan	6789.18	4941.78	4823.02	427.82	802.19	393.41	521.30	2678.30	592.46	3270.75
7	Kodagu	4115.60	2898.68	2893.15	947.99	388.96	304.12	73.90	1178.19	164.37	1342.56
8	Mandya	4942.61	4942.61	4982.44	247.65	850.11	776.32	908.26	2200.10	521.93	2722.03
9	Mysore	6319.07	6319.07	6763.82	628.51	1202.27	740.86	469.12	3723.06	1142.13	4865.19
10	Ramanagara	3511.62	3511.62	3559.12	699.46	514.45	297.90	510.70	1536.61	69.57	1606.18
11	Tumkur	10543.89	3992.00	4031.25	171.04	579.29	606.26	705.13	1969.53	300.47	2270.00
	Sub Total	57736.89	35018.10	35480.75	6162.26	5696.96	3773.98	4062.33	15785.23	3262.94	19048.17
ii)	KERALA										
1	Idukki	5106.26	385.72	329.60	149.88	20.06	1.91	2.14	155.61	49.89	205.50
2	Kannur	2957.80	1.16	1.17	0.19	0.17	0.03	0.03	0.75	0.12	0.87
3	Kozhikode	2347.84	4.42	4.42	0.78	0.68	0.05	0.06	2.84	0.96	3.80
4	Malappuram	3599.11	1.90	1.88	0.55	0.30	0.03	0.06	0.93	0.34	1.27
5	Palakkad	4542.91	619.06	609.92	185.68	86.72	33.59	35.85	268.09	141.57	409.66
6	Wayanad	2141.18	1936.14	1925.72	712.42	137.17	9.61	25.38	1041.13	508.20	1549.33
	Sub Total	20695.10	2948.40	2872.70	1049.49	245.11	45.22	63.52	1469.35	701.08	2170.43
iii)	TAMIL NADU										
1	Ariyalur	1970.10	1623.55	1593.78	6.09	337.10	231.37	202.45	816.78	105.20	921.97
2	Coimbatore	4708.71	2569.37	2577.29	610.44	442.73	65.40	512.33	946.38	16.69	963.07
3	Cuddalore	3725.96	604.91	597.09	2.30	119.43	32.86	85.73	356.78	182.71	539.49
4	Dharmapuri	4529.54	1906.74	1893.37	691.11	284.26	50.09	232.51	635.40	250.46	885.86
5	Dindigul	6164.99	4429.05	4502.08	998.05	743.05	146.31	966.02	1648.65	56.49	1705.14
6	Erode	5802.54	5802.54	5722.64	2275.11	596.11	28.36	1036.19	1786.87	206.61	1993.48
7	Karur	2928.71	2928.71	2895.57	61.87	403.21	782.02	769.41	879.06	57.04	936.10
8	Krishnagiri	5142.53	1909.10	1909.37	757.19	244.50	76.27	159.84	671.58	162.87	834.44
9	Nagapattinam	2516.24	2516.20	2715.79	46.33	811.55	92.47	268.60	1496.85	1190.03	2686.88
10	Namakkal	3434.37	3074.96	3014.81	393.14	566.70	136.03	495.33	1423.61	589.99	2013.60
11	Perambalur	1768.81	625.19	621.15	57.55	110.72	21.02	58.84	373.04	25.36	398.40
12	Pudukkottai	4740.11	734.16	722.26	36.45	227.64	50.64	228.76	178.77	5.04	183.81
13	Salem	5247.41	3027.08	3002.79	725.02	588.35	72.09	357.16	1260.16	500.18	1760.35
14	Thanjavur	3438.78	2221.95	2194.68	21.90	542.03	123.30	269.44	1238.00	511.75	1749.75
15	The Nilgiris	2572.79	2213.40	2189.36	1226.61	114.87	88.77	118.44	640.68	0.00	640.68
16	Thiruvannamalai	2302.70	2300.40	2095.00	24.50	373.84	39.55	87.03	1570.08	1699.08	3269.16
17	Tiruchirappalli	4564.08	4032.11	3890.54	324.87	864.26	128.68	1139.56	1433.18	144.74	1577.92
18	Tiruppur	5266.55	4983.33	4916.19	455.78	675.38	57.10	1953.58	1774.36	22.55	1796.91
	Sub Total	70824.92	47502.75	47053.75	8714.30	8045.71	2222.31	8941.21	19130.22	5726.80	24857.01
iv)	PONDICHERY										
1	Karaikal	154.98	154.98	160.12	0.00	53.19	31.44	29.05	46.44	19.44	65.88
	Sub Total	154.98	154.98	160.12	0.00	53.19	31.44	29.05	46.44	19.44	65.88
	Grand Total	149411.89	85624.23	85567.32	15926.05	14040.97	6072.95	13096.11	36431.24	9710.26	46141.49

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated	Fallow Lands	Net Area		
1	2	3	4	5	6	7	8	9	10	11	12
VII Basin : Pennar											
i)	ANDHRA PRADESH										
1	Anantapur	18987.72	14802.13	14913.05	1535.57	2467.83	497.34	3486.71	6925.60	420.29	7345.90
2	Chittoor	14957.01	4929.17	4993.10	1489.65	1026.23	367.01	1000.19	1110.02	138.47	1248.49
3	Kurnool	17503.31	7747.18	7815.65	1507.84	1196.24	223.67	833.45	4054.45	362.64	4417.09
4	Prakasam	17389.37	945.21	958.07	249.66	182.58	65.72	140.87	319.25	9.69	328.94
5	SPSR Nellore	13090.71	4151.44	4146.78	862.27	1235.00	274.26	712.66	1062.59	188.69	1251.28
6	YSR Cudappah	14969.72	14877.73	15264.62	4978.83	4014.60	611.97	2594.86	3064.37	461.17	3525.54
	Sub Total	96897.84	47452.86	48091.27	10623.82	10122.47	2039.96	8768.74	16536.28	1580.95	18117.23
ii)	KARNATAKA										
1	Bangalore Rural	2294.62	380.08	380.17	18.75	91.27	35.29	55.80	179.06	6.24	185.31
2	Chikkaballapura	4188.56	3367.63	3252.22	399.62	539.05	536.88	187.49	1589.18	123.13	1712.30
3	Kolar	3968.44	388.52	367.10	20.19	72.98	51.72	58.06	164.15	8.93	173.08
4	Tumkur	10543.89	2654.33	2680.43	113.73	385.17	403.11	468.85	1309.56	199.79	1509.35
	Sub Total	20995.51	6790.56	6679.92	552.29	1088.47	1026.99	770.21	3241.95	338.09	3580.04
	Grand Total	117893.35	54243.42	54771.18	11176.11	11210.93	3066.95	9538.95	19778.23	1919.04	21697.27

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available	Other	Fallow	Net		
1	2	3	4	5	6	7	8	9	10	11	12
VIII Basin : East Flowing Rivers from Mahanadi to Pennar											
i)	ANDHRA PRADESH										
1	East Godavari	10571.11	4681.80	5581.06	1954.51	1062.69	209.82	425.73	1928.32	1100.40	3028.72
2	Guntur	11186.51	4641.13	4725.97	671.87	799.68	279.25	387.30	2587.87	771.36	3359.23
3	Krishna	8365.25	3678.45	3837.52	335.01	832.72	185.05	349.25	2135.49	841.48	2976.97
4	Kurnool	17503.31	59.34	59.86	11.55	9.16	1.71	6.38	31.06	2.78	33.83
5	Prakasam	17389.37	15786.99	16001.82	4169.80	3049.41	1097.59	2352.88	5332.13	161.92	5494.04
6	SPSR Nellore	13090.71	2848.33	2876.72	598.18	856.75	190.26	494.39	737.15	130.90	868.04
7	Srikakulam	5730.80	5730.80	5837.00	686.41	1506.82	89.95	510.74	3043.08	1147.56	4190.64
8	Visakhapatnam	11115.36	7501.09	7531.89	2977.17	1621.40	310.53	733.27	1889.52	559.12	2448.64
9	Vizianagaram	5821.45	5821.45	6539.00	1193.03	1507.69	200.09	971.19	2667.00	1059.93	3726.93
10	West Godavari	7582.74	5900.34	6619.26	1034.15	1256.32	295.98	388.99	3643.82	1733.89	5377.71
	Sub Total	108356.61	56649.72	59610.11	13631.66	12502.64	2860.23	6620.13	23995.43	7509.32	31504.75
ii)	TELANGANA										
1	Khammam	15646.02	784.64	665.29	279.17	99.29	34.08	49.17	203.58	23.51	227.09
	Sub Total	15646.02	784.64	665.29	279.17	99.29	34.08	49.17	203.58	23.51	227.09
iii)	ODISHA										
1	Gajapati	3928.20	3928.20	5048.98	2468.98	1520.00	260.00	210.00	590.00	79.11	669.11
2	Ganjam	8197.71	7698.21	8141.63	2957.97	1164.45	525.88	882.72	2610.61	562.99	3173.60
3	Kalahandi	7633.06	645.40	619.61	214.60	68.49	44.81	85.40	206.31	52.45	258.76
4	Kandhamal	7770.03	1962.90	2124.53	1442.44	313.25	83.37	141.47	144.00	4.94	148.94
5	Khordha	2654.72	192.40	220.95	44.84	46.38	38.41	15.94	75.37	15.99	91.36
6	Koraput	8180.27	1486.94	1297.76	341.65	347.18	125.42	134.51	349.00	58.82	407.82
7	Nayagarh	3755.00	296.34	330.75	164.23	44.98	22.89	20.52	78.13	30.40	108.53
8	Rayagada	7126.04	6150.44	6492.48	2427.30	2019.64	241.67	561.01	1242.86	76.24	1319.09
	Sub Total	49245.03	22360.83	24276.68	10062.01	5524.38	1342.44	2051.58	5296.28	880.93	6177.20
	Grand Total	173247.66	79795.19	84552.08	23972.84	18126.31	4236.76	8720.88	29495.29	8413.76	37909.04

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
IX	Basin : East Flowing Rivers from Pennar to Kanyakumari										
i)	ANDHRA PRADESH										
1	Chittoor	14957.01	10027.85	10157.91	3030.53	2087.76	746.63	2034.77	2258.21	281.69	2539.91
2	SPSR Nellore	13090.71	6090.94	6145.72	1277.93	1830.33	406.47	1056.19	1574.81	279.65	1854.46
3	YSR Cudappah	14969.72	92.00	94.39	30.79	24.83	3.78	16.05	18.95	2.85	21.80
	Sub Total	43017.44	16210.79	16398.02	4339.24	3942.91	1156.88	3107.01	3851.97	564.19	4416.16
ii)	KARNATAKA										
1	Bangalore Urban	2175.82	1188.00	1187.06	27.60	706.95	93.97	132.37	226.16	21.59	247.75
2	Bangalore Rural	2294.62	935.62	935.85	46.16	224.66	86.87	137.37	440.78	15.37	456.16
3	Chikkaballapura	4188.56	814.53	786.61	96.66	130.38	129.85	45.35	384.37	29.78	414.15
4	Kolar	3968.44	3579.91	3382.55	186.01	672.48	476.52	535.02	1512.51	82.32	1594.82
	Sub Total	12627.44	6518.06	6292.08	356.43	1734.48	787.22	850.11	2563.83	149.06	2712.89
iii)	KERALA										
1	Idukki	5106.26	38.13	32.58	14.82	1.98	0.19	0.21	15.38	4.93	20.31
2	Kollam	2556.16	11.68	11.37	3.72	1.63	0.12	0.28	5.62	1.29	6.91
3	Pathanamthitta	2709.55	4.92	4.82	2.82	0.36	0.04	0.12	1.48	0.39	1.88
4	Thiruvananthapuram	2246.81	4.33	4.22	0.96	0.71	0.01	0.07	2.47	0.66	3.14
	Sub Total	12618.78	59.06	52.98	22.32	4.67	0.35	0.68	24.96	7.28	32.24
iv)	TAMIL NADU										
1	Ariyalur	1970.10	346.55	340.20	1.30	71.95	49.39	43.21	174.34	22.45	196.80
2	Chennai	128.00	128.00	170.98	3.00	167.98	0.00	0.00	0.00	0.00	0.00
3	Cuddalore	3725.96	3121.05	3080.72	11.85	616.22	169.53	442.30	1840.81	942.72	2783.53
4	Dharmapuri	4529.54	2622.80	2604.40	950.66	391.02	68.89	319.82	874.01	344.52	1218.53
5	Dindigul	6164.99	1735.94	1764.56	391.18	291.23	57.34	378.63	646.18	22.14	668.32
6	Kancheepuram	4475.20	4475.19	4432.09	238.56	1625.98	415.08	1299.67	852.81	112.49	965.30
7	Kanniyakumari	1746.80	70.81	67.78	21.95	13.45	0.37	1.24	30.76	3.11	33.87
8	Krishnagiri	5142.53	3233.43	3233.89	1282.45	414.10	129.17	270.72	1137.44	275.84	1413.29
9	Madurai	3767.70	3767.63	3741.66	484.72	885.66	174.16	952.18	1244.94	58.04	1302.98
10	Namakkal	3434.37	359.41	352.38	45.95	66.24	15.90	57.89	166.40	68.96	235.36
11	Perambalur	1768.81	1143.62	1136.24	105.26	202.52	38.44	107.63	682.37	46.40	728.77
12	Pudukkottai	4740.11	4005.95	3941.03	198.90	1242.13	276.32	1248.24	975.44	27.49	1002.94
13	Ramanathapuram	4040.52	4040.51	4089.56	44.88	915.69	346.28	794.54	1988.18	0.00	1988.18
14	Salem	5247.41	2220.33	2202.51	531.80	431.55	52.87	261.98	924.32	366.88	1291.19
15	Sivaganga	4325.62	4325.62	4189.00	165.33	1272.96	262.37	1529.04	959.30	0.86	960.16
16	Thanjavur	3438.78	1216.83	1201.89	12.00	296.83	67.53	147.56	677.98	280.26	958.24
17	Theni	2909.55	2907.60	3240.13	1036.49	678.89	44.26	355.69	1124.80	148.31	1273.11
18	Thiruvallur	3377.77	3377.77	3422.43	197.36	1234.17	221.53	741.69	1027.68	464.73	1492.41
19	Thoothukkudi	4763.91	4763.91	4707.24	110.12	963.58	869.71	786.88	1976.95	31.28	2008.23
20	Tiruchirappalli	4564.08	531.97	513.29	42.86	114.02	16.98	150.35	189.08	19.10	208.18
21	Tirunelveli	6998.99	6982.02	6742.11	1274.48	1328.73	488.20	1997.19	1653.51	281.08	1934.59
22	Tiruvannamalai	6187.67	6187.67	6312.05	1528.10	1170.67	132.78	1614.80	1865.70	687.47	2553.17
23	Vellore	6056.53	6056.53	5920.18	1622.86	1011.51	127.91	1452.68	1705.22	318.29	2023.51
24	Viluppuram	7211.86	7211.85	7222.02	716.97	1927.66	200.57	1000.77	3376.06	1376.47	4752.52
25	Virudhunagar	4487.16	4487.15	4243.22	264.66	750.35	158.09	1831.82	1238.31	37.90	1276.21
	Sub Total	105203.96	79320.14	78871.56	11283.68	18085.10	4383.68	17786.51	27332.58	5936.78	33269.36
v)	PONDICHERY										
1	Pondicherry	301.19	301.19	293.78	3.99	122.35	21.26	46.42	99.76	85.73	185.49
	Sub Total	301.19	301.19	293.78	3.99	122.35	21.26	46.42	99.76	85.73	185.49
	Grand Total	173768.81	102409.24	101908.42	16005.67	23889.51	6349.40	21790.73	33873.11	6743.03	40616.14

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
X	Basin : Narmada										
i)	GUJARAT										
1	Bharuch	5083.67	1849.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Dohad	3458.35	60.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Narmada	2719.36	2321.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Panch Mahals	5095.62	137.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Surat	4174.64	168.82	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Vadodara	7234.95	3788.50	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	27766.59	8326.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH										
1	Alirajpur	3217.78	3001.03	3568.83	1130.01	692.55	97.57	47.37	1601.33	388.21	1989.55
2	Anuppur	3637.40	517.37	532.92	108.74	85.73	39.31	65.42	233.73	63.36	297.08
3	Balaghat	8897.36	2210.54	2296.91	1254.86	142.90	130.04	81.59	687.52	172.76	860.28
4	Barwani	5234.28	3841.08	3888.18	1343.40	745.75	85.17	24.60	1689.26	469.76	2159.02
5	Betul	9690.38	3712.61	3861.12	1522.49	278.89	255.00	153.56	1651.18	676.76	2327.94
6	Bhopal	2618.98	3.33	3.53	0.56	0.48	0.47	0.08	1.95	1.13	3.08
7	Burhanpur	3084.12	368.60	409.63	241.32	26.26	14.81	3.01	124.22	25.89	150.12
8	Chhindwara	11361.38	3389.22	3534.75	1424.09	219.43	246.88	122.65	1521.70	641.56	2163.27
9	Damoh	7068.37	417.79	430.64	157.89	54.16	26.47	4.55	187.58	119.95	307.53
10	Dewas	6700.19	3740.87	3915.56	1153.70	267.29	244.08	2.77	2247.72	1864.29	4112.01
11	Dhar	7842.30	4756.36	4970.52	728.03	815.73	362.01	22.59	3042.17	1873.40	4915.56
12	Dindori	5543.20	4598.04	2977.34	210.17	325.76	250.73	526.51	1664.17	745.56	2409.72
13	East Nimar (Khandwa)	7169.74	6469.19	6998.31	2754.90	920.91	457.93	128.93	2735.65	1372.92	4108.56
14	Harda	3192.55	3127.44	3238.37	1013.29	254.79	147.09	11.35	1811.85	1703.41	3515.26
15	Hoshangabad	6456.42	6456.42	6686.89	2561.00	472.33	422.63	80.20	3150.73	2966.39	6117.12
16	Indore	3765.95	1013.68	1031.18	140.53	137.85	52.84	23.99	675.97	580.30	1256.27
17	Jabalpur	4911.29	4619.32	4888.58	730.31	728.24	597.34	261.85	2570.84	1483.81	4054.65
18	Jhabua	3302.18	7.92	7.03	0.26	1.61	0.54	0.07	4.55	1.47	6.02
19	Katni	4867.17	1093.93	1108.26	218.29	169.36	157.06	80.49	483.06	199.29	682.35
20	Mandla	7201.48	6371.63	8542.95	5249.53	475.99	390.93	438.13	1988.37	900.57	2888.94
21	Narsinghpur	4947.28	4818.19	5002.48	1326.31	262.93	328.59	62.71	3021.96	1530.95	4552.91
22	Raisen	8172.10	4494.04	4667.46	1834.95	240.37	183.64	17.28	2391.23	1351.01	3742.24
23	Sagar	9858.18	371.79	385.72	112.36	26.76	33.18	6.69	206.74	126.87	333.61
24	Sehore	6317.41	3143.66	3266.21	858.95	257.71	159.18	5.40	1984.97	1806.57	3791.54
25	Seoni	8422.70	2153.12	2237.81	839.80	157.46	131.50	89.67	1019.39	457.88	1477.27
26	Umaria	4411.61	0.47	0.48	0.25	0.05	0.03	0.04	0.11	0.04	0.15
27	West Nimar (Khargone)	7757.16	7397.29	7806.78	2354.19	800.32	742.51	113.53	3796.24	1709.73	5505.97
	Sub Total	165648.96	82094.93	86258.44	29270.17	8561.57	5557.53	2375.01	40494.16	23233.84	63728.00
iii)	CHHATISGARH										
1	Bilaspur	8022.86	0.71	0.51	0.19	0.03	0.06	0.02	0.21	0.05	0.26
2	Kabeertham	4061.73	596.41	652.99	278.17	39.32	47.88	14.24	273.38	119.71	393.10
3	Rajnandgaon	7764.54	78.58	81.19	26.18	6.98	7.86	5.39	34.79	10.45	45.23
	Sub Total	19849.13	675.70	734.69	304.54	46.33	55.79	19.66	308.38	130.21	438.59
iv)	MAHARASHTRA										
1	Dhule	6925.51	7.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Nandurbar	5684.20	1572.12	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	12609.71	1580.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	225874.39	92677.05	86993.13	29574.71	8607.90	5613.32	2394.66	40802.54	23364.05	64166.59

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
XI	Basin : Tapi										
i)	GUJARAT										
1	Narmada	2719.36	398.16	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bharuch	5083.67	1034.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Surat	4174.64	2654.37	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Tapi	3040.24	1686.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	The Dangs	1700.82	25.75	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	16718.73	5798.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH										
1	Harda	3192.55	65.11	67.42	21.10	5.30	3.06	0.24	37.72	35.46	73.18
2	Burhanpur	3084.12	2715.52	3017.78	1777.82	193.45	109.14	22.21	915.17	190.77	1105.93
3	Betul	9690.38	3848.03	4001.95	1578.03	289.06	264.30	159.16	1711.41	701.44	2412.85
4	East Nimar (Khandwa)	7169.74	700.55	757.85	298.33	99.73	49.59	13.96	296.24	148.67	444.92
5	West Nimar (Khargone)	7757.16	359.87	379.79	114.53	38.93	36.12	5.52	184.68	83.18	267.86
6	Barwani	5234.28	1393.21	1410.29	487.27	270.49	30.89	8.92	612.72	170.39	783.11
	Sub Total	36128.23	9082.29	9635.09	4277.07	896.97	493.10	210.01	3757.94	1329.91	5087.85
iii)	MAHARASHTRA										
1	Washim	5017.05	1056.31	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Nashik	15021.09	5959.21	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Nandurbar	5684.20	4111.38	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Jalna	7510.09	123.51	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Jalgaon	11349.74	11334.09	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Dhule	6925.51	6864.04	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Buldana	9409.67	5613.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Aurangabad	9772.28	1046.84	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Akola	5214.95	5214.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Amravati	11765.11	7744.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	87669.69	49067.70	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	140516.65	63948.72	9635.09	4277.07	896.97	493.10	210.01	3757.94	1329.91	5087.85

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 14 : Land Utilisation Pattern by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
XII	Basin : West Flowing Rivers from Tapi to Tadri										
i)	DADRA & NAGAR HAVELI										
1	Dadra & Nagar Haveli	477.07	477.07	488.82	203.52	37.57	13.84	44.49	189.40	42.93	232.33
	Sub Total	477.07	477.07	488.82	203.52	37.57	13.84	44.49	189.40	42.93	232.33
ii)	DAMAN & DIU										
1	Daman	70.98	70.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	70.98	70.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
iii)	GOA										
1	North Goa	1650.18	1650.18	1674.36	350.42	205.19	241.11	109.64	768.00	178.35	946.35
2	South Goa	1917.11	1917.11	1936.77	904.31	166.18	303.07	38.78	524.43	106.24	630.67
	Sub Total	3567.29	3567.29	3611.13	1254.73	371.37	544.18	148.42	1292.43	284.59	1577.02
iv)	GUJARAT										
1	Navsari	2146.71	2146.71	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Surat	4174.64	1351.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Tapi	3040.24	1354.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	The Dangs	1700.82	1675.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Valsad	2894.91	2894.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	13957.32	9422.26	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
v)	KARNATAKA										
1	Belgaum	13120.75	1007.02	1031.82	146.15	87.63	30.27	211.26	556.51	230.12	786.64
2	Dharwad	4202.26	1422.24	1446.28	119.25	93.43	21.80	85.73	1126.07	442.45	1568.52
3	Haveri	4743.98	120.36	123.09	12.04	9.92	4.44	4.84	91.86	16.96	108.82
4	Shimoga	8361.30	15.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Uttara Kannada	10048.65	8350.89	8504.84	6752.84	421.68	231.41	169.46	929.44	86.90	1016.34
	Sub Total	40476.94	10915.52	11106.02	7030.28	612.66	287.92	471.28	2703.88	776.44	3480.32
vi)	MAHARASHTRA										
1	Ahmadnagar	16510.41	12.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Dhule	6925.51	53.52	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Kolhapur	7500.31	262.87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Mumbai	144.60	144.60	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Mumbai (Suburban)	438.28	438.28	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Nandurbar	5684.20	0.69	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Nashik	15021.09	2088.62	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Pune	15185.75	313.94	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Raigarh	6942.67	6940.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Ratnagiri	8050.94	8036.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Sangli	8349.99	3.80	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Satara	10223.37	36.06	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Sindhudurg	4966.78	4842.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	Thane	9208.22	9202.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	115152.12	32375.79	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	173701.72	56828.91	15205.97	8488.53	1021.60	845.94	664.19	4185.71	1103.96	5289.67

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

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(Area in Sq.Km)

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					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
XIII Basin : West Flowing Rivers from Tadri to Kanyakumari											
i)	KARNATAKA										
1	Chikmagalur	7167.73	152.22	153.35	42.90	15.24	27.12	4.69	63.40	12.54	75.95
2	Dakshina Kannada	4578.68	4577.59	4772.67	1284.45	1269.60	687.79	107.15	1423.68	251.93	1675.61
3	Hassan	6789.18	462.78	451.66	40.06	75.12	36.84	48.82	250.81	55.48	306.29
4	Kodagu	4115.60	1216.92	1214.60	397.98	163.29	127.67	31.02	494.63	69.00	563.63
5	Shimoga	8361.30	2652.20	2704.39	883.15	325.44	659.18	108.00	728.62	113.26	841.88
6	Udupi	3841.79	3838.73	3561.62	1000.22	538.14	919.77	134.52	968.97	145.17	1114.14
7	Uttara Kannada	10048.65	1033.70	1024.679	813.595	50.805	27.881	20.417	111.981	10.47	122.451
	Sub Total	44902.93	13934.14	13882.96	4462.38	2437.63	2486.24	454.63	4042.09	657.87	4699.95
ii)	KERALA										
1	Alappuzha	1454.48	1454.48	1410.11	0.00	360.69	164.99	63.10	821.33	210.02	1031.35
2	Ernakulam	2454.58	2454.57	3058.25	706.17	543.15	123.26	163.26	1522.41	142.20	1664.61
3	Idukki	5106.26	4682.42	4001.11	1819.44	243.50	23.19	25.99	1888.99	605.62	2494.61
4	Kannur	2957.80	2956.64	2969.96	487.15	433.43	75.65	68.95	1904.77	305.45	2210.22
5	Kasaragod	1964.67	1964.67	1991.66	56.25	334.24	87.54	36.10	1477.53	48.77	1526.30
6	Kollam	2556.16	2544.48	2476.51	810.66	354.38	25.81	60.68	1224.98	280.57	1505.55
7	Kottayam	2258.83	2258.83	2204.42	81.41	355.52	67.24	83.32	1616.93	407.30	2024.23
8	Kozhikode	2347.84	2343.42	2341.99	413.08	360.91	26.23	33.93	1507.85	508.29	2016.14
9	Malappuram	3599.11	3597.21	3552.58	1033.62	574.49	63.38	115.20	1765.90	640.13	2406.03
10	Palakkad	4542.91	3923.85	3865.92	1176.89	549.69	212.90	227.20	1699.23	897.34	2596.57
11	Pathanamthitta	2709.55	2704.62	2647.94	1549.32	197.54	19.87	65.50	815.71	215.85	1031.56
12	Thiruvananthapuram	2246.81	2242.48	2183.59	497.65	365.18	4.27	36.06	1280.43	343.92	1624.34
13	Thrissur	3071.57	3071.56	3029.18	1036.19	447.90	92.41	154.52	1298.17	449.80	1747.96
14	Wayanad	2141.18	205.04	203.94	75.45	14.53	1.02	2.69	110.26	53.82	164.08
	Sub Total	39411.75	36404.27	35937.17	9743.27	5135.14	987.76	1136.50	18934.49	5109.07	24043.56
iii)	TAMIL NADU										
1	Coimbatore	4708.71	2139.34	2145.93	508.27	368.63	54.46	426.59	787.99	13.90	801.89
2	Kanniyakumari	1746.80	1675.98	1604.21	519.59	318.39	8.80	29.32	728.11	73.57	801.68
3	The Nilgiris	2572.79	359.39	355.49	199.16	18.65	14.41	19.23	104.03	0.00	104.03
4	Theni	2909.55	1.95	2.17	0.70	0.46	0.03	0.24	0.75	0.10	0.85
5	Tirunelveli	6998.99	16.96	16.38	3.10	3.23	1.19	4.85	4.02	0.68	4.70
6	Tiruppur	5266.55	283.22	279.40	25.90	38.38	3.24	111.03	100.84	1.28	102.12
7	Virudhunagar	4487.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	28690.55	4476.84	4403.59	1256.72	747.74	82.13	591.26	1725.74	89.53	1815.28
iv)	PONDICHERY										
1	Mahe	9.90	9.90	8.70	0.00	2.43	0.30	0.13	5.84	0.00	5.84
	Sub Total	9.90	9.90	8.70	0.00	2.43	0.30	0.13	5.84	0.00	5.84
	Grand Total	113015.13	54825.15	54232.42	15462.37	8322.94	3556.43	2182.51	24708.16	5856.47	30564.63

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

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					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
XIV	Basin : Mahi										
i)	GUJARAT										
1	Anand	2806.43	996.53	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bharuch	5083.67	2199.42	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Dohad	3458.35	3397.99	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Kheda	3843.53	518.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Panch Mahals	5095.62	4889.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Sabar Kantha	7140.29	26.43	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Vadodara	7234.95	3446.45	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	34662.84	15474.34	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH										
1	Alirajpur	3217.78	216.75	257.76	81.61	50.02	7.05	3.42	115.66	28.04	143.70
2	Dhar	7842.30	1505.16	1572.93	230.39	258.14	114.56	7.15	962.70	592.84	1555.54
3	Jhabua	3302.18	3294.25	2923.53	108.31	671.03	224.54	27.36	1892.29	612.84	2505.13
4	Nemuch	4001.43	29.18	28.70	6.88	6.42	1.89	0.09	13.41	9.38	22.80
5	Ratlam	4639.98	1820.86	1907.23	134.76	276.74	170.50	5.79	1319.44	842.35	2161.79
	Sub Total	23003.67	6866.20	6690.15	561.96	1262.35	518.54	43.81	4303.49	2085.45	6388.95
iii)	RAJASTHAN										
1	Banswara	4332.72	4332.72	4535.87	912.69	631.18	380.09	342.70	2269.21	1165.97	3435.18
2	Chittaurgarh	7500.49	133.03	133.16	21.38	20.59	28.60	6.12	56.47	40.14	96.62
3	Dungarpur	3640.43	3042.56	3222.67	538.87	754.90	475.44	362.42	1091.04	526.15	1617.19
4	Pratapgarh	4141.45	2993.52	2976.11	874.11	280.16	418.76	87.32	1315.76	846.70	2162.46
5	Udaipur	11459.12	5494.69	6656.73	1905.23	2263.90	976.88	397.37	1113.36	526.70	1640.06
	Sub Total	31074.21	15996.52	17524.54	4252.29	3950.72	2279.76	1195.93	5845.84	3105.66	8951.51
	Grant Total	88740.72	38337.06	24214.69	4814.25	5213.07	2798.30	1239.74	10149.34	5191.12	15340.45
XV	Basin: Sabarmati										
i)	GUJARAT										
1	Ahmedabad	7712.66	4718.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Anand	2806.43	1785.66	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Banaskantha	10247.55	506.28	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Bhavnagar	8062.74	213.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Gandhinagar	2055.07	2055.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Kheda	3843.53	3325.40	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Maheana	4244.35	2087.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Panchmahal	5095.62	68.67	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Rajkot	10762.12	261.22	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Sabarkantha	7140.29	7113.86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Surendranagar	10116.24	4603.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	72086.60	26738.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	RAJASTHAN										
1	Dungarpur	3640.43	597.87	633.26	105.89	148.34	93.42	71.22	214.39	103.39	317.78
2	Sirohi	4961.34	54.66	57.06	17.13	11.03	4.65	6.85	17.39	5.84	23.24
3	Udaipur	11459.12	3289.85	3985.60	1140.72	1355.47	584.89	237.92	666.60	315.35	981.96
	Sub Total	20060.89	3942.38	4675.93	1263.74	1514.84	682.97	315.99	898.39	424.59	1322.98
	Grant Total	92147.49	30680.58	4675.93	1263.74	1514.84	682.97	315.99	898.39	424.59	1322.98
XVI	Basin : WFR of Kutch, Saurashtra Including Luni										
i)	GUJARAT										
1	Ahmadabad	7712.66	2994.60	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Amreli	7100.01	7100.01	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Anand	2806.43	24.24	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Banas Kantha	10247.55	9741.27	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Bhavnagar	8062.74	7849.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Jamnagar	10490.91	10490.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Junagadh	8497.29	8497.29	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Kachchh	40508.20	40508.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Maheana	4244.35	2156.99	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Patan	5431.61	5431.61	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Porbandar	2203.38	2203.38	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Rajkot	10762.12	10500.90	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Surendranagar	10116.24	5512.88	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	128183.49	113011.77	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	RAJASTHAN										
1	Ajmer	8206.23	1870.76	1921.76	131.75	311.36	337.61	128.43	1012.61	459.07	1471.68
2	Barmer	27351.28	20773.88	21398.24	253.48	1553.95	3226.43	5478.80	10885.57	1298.66	12184.23
3	Bhilwara	10052.59	2.23	2.33	0.17	0.47	0.53	0.23	0.93	0.49	1.42
4	Chittaurgarh	7500.49	36.42	36.46	5.85	5.64	7.83	1.68	15.46	10.99	26.45
5	Jaisalmer	37070.06	2021.38	2093.44	14.94	311.54	1246.83	142.97	377.15	97.66	474.81
6	Jalor	10322.33	10322.33	10566.11	236.38	1228.30	685.40	1925.61	6490.42	2186.35	8676.77
7	Jodhpur	22037.60	13324.02	13642.31	50.65	1344.42	809.26	3481.38	7956.61	1654.69	9611.29
8	Nagaur	17026.59	6096.23	6315.96	66.42	521.89	299.07	1029.10	4399.49	899.19	5298.68
9	Pali	11890.23	11890.23	12330.79	865.34	1985.68	1408.48	2137.80	5933.49	1006.97	6940.46
10	Rajsamand	4485.42	364.89	368.29	21.35	103.13	142.01	28.14	73.67	33.67	107.33
11	Sikar	7428.38	2.75	2.87	0.23	0.20	0.18	0.35	1.91	0.86	2.76
12	Sirohi	4961.34	4906.68	5122.41	1537.75	990.36	417.85	614.96	1561.50	524.55	2086.04
13	Udaipur	11459.12	205.67	249.17	71.31	84.74	36.57	14.87	41.67	19.71	61.39
	Sub Total	179791.66	71817.47	74050.13	3255.62	8441.68	8618.05	14984.30	38750.48	8192.85	46943.32
iii)	Daman & Diu										
1	Diu	34.39	34.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	34.39	34.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grant Total	308009.54	184863.63	74050.13	3255.62	8441.68	8618.05	14984.30	38750.48	8192.85	46943.32

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
I Basin : Mahanadi												
i) JHARKHAND												
	Simdega	3639.71	145.66	0.20	0.00	0.20	0.10	0.15	0.41	0.56	0.60	1.46
	Sub Total	3639.71	145.66	0.20	0.00	0.20	0.10	0.15	0.41	0.56	0.60	1.46
ii) ODISHA												
1	Anugul	6129.61	2060.53	15.36	8.42	23.78	2.08	9.88	1.89	11.77	0.00	37.63
2	Balangir	6332.43	6332.43	0.58	8.41	8.99	1.65	50.01	15.41	65.42	0.00	76.06
3	Bargarh	5583.76	5583.76	1450.93	66.29	1517.22	64.56	135.47	2.65	138.12	0.00	1719.90
4	Baudh	3006.39	3006.39	160.55	15.89	176.44	2.80	11.29	2.51	13.80	0.00	193.04
5	Cuttack	3802.97	3683.62	204.68	549.94	754.62	18.24	44.29	2.48	46.76	0.00	819.62
6	Debagarh	2726.66	271.58	4.05	3.66	7.71	0.00	0.94	0.08	1.01	0.00	8.73
7	Dhenkanal	4310.65	660.17	10.37	1.93	12.30	0.08	3.54	0.42	3.96	0.00	16.33
8	Ganjam	8197.71	499.49	68.72	28.62	97.34	22.30	3.08	0.32	3.40	0.00	123.04
9	Jagatsinghpur	1678.55	1678.55	576.60	0.00	576.60	0.06	35.94	0.77	36.71	0.00	613.37
10	Jajapur	2792.19	41.71	3.07	0.20	3.27	0.13	1.13	0.05	1.18	0.00	4.58
11	Jharsuguda	2036.85	2036.85	0.00	1.62	1.62	0.00	20.73	0.00	20.73	0.00	22.35
12	Kalahandi	7633.06	6570.09	817.52	67.33	884.85	1.51	29.45	8.42	37.87	0.00	924.23
13	Kandhamal	7770.03	5807.13	1.93	14.06	15.99	0.57	5.10	1.39	6.49	0.00	23.05
14	Kendrapara	2388.95	1292.70	227.87	3.56	231.42	0.00	18.70	0.83	19.53	0.00	250.95
15	Khordha	2654.72	2462.32	175.52	1.67	177.19	9.88	13.26	1.71	14.97	0.00	202.03
16	Nabarangapur	5236.39	1655.37	0.84	4.72	5.56	0.03	11.86	1.66	13.51	0.00	19.10
17	Nayagarh	3755.00	3458.66	46.78	46.70	93.48	2.18	11.70	2.45	14.15	0.00	109.81
18	Nuapada	3728.43	3728.43	73.85	12.67	86.52	0.24	13.19	0.56	13.75	0.00	100.51
19	Puri	3433.02	3433.02	698.24	75.49	773.73	0.00	170.80	0.01	170.81	0.00	944.54
20	Rayagada	7126.04	104.47	1.76	5.34	7.09	0.51	0.65	0.02	0.67	0.00	8.28
21	Sambalpur	6479.54	5266.85	415.62	10.00	425.62	3.81	42.89	0.74	43.63	0.00	473.07
22	Subarnapur	2271.97	2271.97	726.94	5.64	732.58	0.19	33.62	0.54	34.16	0.00	766.93
23	Sundargarh	9353.52	3941.17	5.73	22.45	28.18	0.64	20.28	1.31	21.59	0.00	50.41
	Sub Total	108428.44	65847.26	5687.51	954.59	6642.10	131.46	687.81	46.20	734.01	0.00	7507.56
iii) MADHYA PRADESH												
1	Anuppur	3637.40	121.78	0.29	0.00	0.29	0.03	0.52	0.41	0.92	1.08	2.32
2	Balaghat	8897.36	0.10	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.02
3	Dindori	5543.20	27.29	0.07	0.00	0.07	0.00	0.00	0.04	0.04	0.07	0.18
4	Mandla	7201.48	2.50	0.11	0.00	0.11	0.00	0.00	0.04	0.04	0.02	0.17
	Sub Total	25279.44	151.67	0.47	0.00	0.47	0.04	0.52	0.49	1.01	1.17	2.69
iv) CHHATTISGARH												
1	Bastar	10152.59	347.86	0.35	0.00	0.35	0.21	0.69	0.08	0.77	0.85	2.18
2	Bilaspur	8022.86	7190.01	581.45	0.00	581.45	36.19	308.59	23.83	332.42	5.88	955.94
3	Dhamtari	3915.57	3903.65	1249.69	0.00	1249.69	2.85	371.41	4.11	375.51	21.42	1649.48
4	Durg	8287.60	8256.76	576.54	0.00	576.54	14.81	505.94	6.58	512.52	35.07	1138.94
5	Jashpur	5583.19	3918.09	1364.77	0.00	1364.77	18.02	91.66	6.72	98.38	21.50	1502.66
6	Janjgir-Champa	3723.65	3723.65	47.34	0.00	47.34	1.99	1.51	19.55	21.06	25.60	95.99
7	Kabeergham	4061.73	3465.32	155.57	0.00	155.57	0.60	667.36	2.83	670.19	21.66	848.03
8	Korba	6333.50	6333.17	46.08	0.00	46.08	4.89	3.30	8.22	11.52	21.19	83.68
9	Koriya	6383.21	2478.01	18.78	0.00	18.78	0.99	6.16	4.08	10.24	5.30	35.32
10	Mahasamund	4559.96	4559.96	409.41	0.00	409.41	66.54	559.51	8.81	568.32	47.68	1091.95
11	Raigarh	6819.11	6818.53	218.18	0.00	218.18	46.46	361.13	6.78	367.91	76.70	709.25
12	Raipur	11995.63	11995.63	1294.11	0.00	1294.11	39.80	287.49	5.70	293.19	25.19	1652.29
13	Rajnandgaon	7764.54	5467.60	394.79	0.00	394.79	12.63	361.23	12.20	373.42	14.70	795.54
14	Surguja	15125.37	2477.40	8.93	0.00	8.93	0.72	0.96	2.41	3.38	14.71	27.74
15	Kanker	6567.07	2278.90	23.07	0.00	23.07	9.28	72.14	2.77	74.91	0.00	107.26
	Sub Total	109295.58	73214.54	6389.06	0.00	6389.06	255.97	3599.09	114.67	3713.75	337.46	10696.24
v) MAHARASHTRA												
1	Gadchiroli	13966.06	298.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Gondiya	5273.77	23.83	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	19239.83	322.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	265883.00	139681.52	12077.24	954.59	13031.83	387.56	4287.56	161.77	4449.33	339.22	18207.94

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
II Basin : Subernarekha & Bhurhabalang												
JHARKHAND												
i)												
1	Bokaro	2688.22	17.01	0.00	0.00	0.00	0.19	0.00	0.23	0.23	0.00	0.42
2	Khunti	2603.07	1297.28	1.80	0.00	1.80	4.97	5.09	13.05	18.15	6.33	31.25
3	Pashchimi Singhbhum	6941.29	2687.33	2.45	0.00	2.45	4.27	0.00	2.45	2.45	6.08	15.25
4	Purbi Singhbhum	3433.65	3119.28	8.93	0.00	8.93	11.79	4.47	3.66	8.13	10.94	39.79
5	Ramgarh	1259.52	136.64	0.00	0.00	0.00	1.49	0.00	3.54	3.54	0.40	5.43
6	Ranchi	4743.84	2802.26	0.00	0.00	0.00	10.50	16.96	50.12	67.08	22.47	100.06
7	Saraikela Kharsawan	2546.17	2536.09	11.83	0.00	11.83	34.66	0.00	16.26	16.26	28.26	91.01
	Sub Total	24215.76	12595.89	25.02	0.00	25.02	67.88	26.52	89.32	115.84	74.47	283.21
ODISHA												
1	Baleswar	3733.69	2644.77	109.73	0.00	109.73	0.00	342.93	2.94	345.87	0.00	455.60
2	Mayurbhanj	10035.64	7146.63	180.00	80.11	260.12	26.33	98.70	41.89	140.59	0.00	427.04
	Sub Total	13769.33	9791.40	289.73	80.11	369.85	26.33	441.63	44.83	486.46	0.00	882.64
WEST BENGAL												
iii)												
1	Pashchim Medinipur	9021.98	2387.68	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Purba Medinipur	3893.57	85.26	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Purulia	6003.10	931.92	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	18918.65	3404.86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	56903.74	25792.15	314.75	80.11	394.87	94.21	468.15	134.14	602.30	74.47	1165.84
III Basin : Brahmani and Baitarni												
JHARKHAND												
i)												
1	Gumla	5149.51	4312.74	2.33	0.00	2.33	18.48	0.00	23.52	23.52	27.55	71.87
2	Khunti	2603.07	1305.80	1.81	0.00	1.81	5.01	5.13	13.14	18.26	6.37	31.45
3	Latehar	4092.97	11.85	0.01	0.00	0.01	0.07	0.09	0.08	0.17	0.04	0.29
4	Lohardaga	1439.38	911.85	4.76	0.00	4.76	23.38	8.56	29.59	38.16	31.24	97.54
5	Pashchimi Singhbhum	6941.29	4253.95	3.89	0.00	3.89	6.75	0.00	3.89	3.89	9.62	24.15
6	Ranchi	4743.84	1150.39	0.00	0.00	0.00	4.31	6.96	20.58	27.54	9.22	41.07
7	Simdega	3639.71	3494.05	4.88	0.00	4.88	2.32	3.58	9.83	13.41	14.33	34.94
	Sub Total	28609.77	15440.63	17.67	0.00	17.67	60.32	24.32	100.62	124.94	98.39	301.32
CHATTISGARH												
ii)												
1	Jashpur	5583.19	1205.37	10.22	0.00	10.22	0.43	0.33	4.22	4.55	5.53	20.72
2	Surguja	15125.37	158.79	0.57	0.00	0.57	0.05	0.06	0.15	0.22	0.94	1.78
	Sub Total	20708.56	1364.16	10.79	0.00	10.79	0.48	0.39	4.38	4.76	6.47	22.50
ODISHA												
iii)												
1	Anugul	6129.61	4069.08	30.32	16.64	46.96	4.10	19.51	3.73	23.24	0.00	74.30
2	Baleswar	3733.69	1081.10	44.85	0.00	44.85	0.00	140.18	1.20	141.38	0.00	186.23
3	Bhadrak	2390.28	2390.28	738.05	0.00	738.05	0.00	91.45	1.89	93.34	0.00	831.39
4	Cuttack	3802.97	119.34	6.63	17.82	24.45	0.59	1.43	0.08	1.52	0.00	26.55
5	Debagarh	2706.30	2434.72	36.62	33.06	69.68	0.00	8.48	0.68	9.17	0.00	78.85
6	Dhenkanal	4310.65	3650.47	57.35	10.64	67.99	0.42	19.55	2.32	21.87	0.00	90.29
7	Jajapur	2792.19	2750.48	202.47	12.87	215.34	8.64	74.67	3.07	77.74	0.00	301.72
8	Kendrapara	2388.95	1096.25	193.24	3.01	196.26	0.00	15.86	0.70	16.56	0.00	212.82
9	Kendujhar	7996.91	7996.91	197.30	62.23	259.53	9.36	20.88	7.64	28.52	0.00	297.41
10	Mayurbhanj	10035.64	2889.01	72.77	32.39	105.15	10.65	39.90	16.93	56.83	0.00	172.63
11	Sambalpur	6479.54	1212.69	95.70	2.30	98.00	0.88	9.88	0.17	10.05	0.00	108.92
12	Sundargarh	9353.52	5412.35	7.87	30.82	38.69	0.88	27.86	1.80	29.66	0.00	69.23
	Sub Total	62120.25	35102.68	1683.17	221.79	1904.96	35.52	469.65	40.23	509.87	0.00	2450.35
	Grand Total	111438.58	51907.47	1711.63	221.79	1933.42	96.31	494.36	145.22	639.58	104.86	2774.17

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
IV	Basin : Godavari											
i)	ANDHRA PRADESH											
1	East Godavari	10571.11	5889.31	1876.00	0.00	1876.00	140.09	636.65	0.61	637.25	100.70	2754.04
2	Visakhapatnam	11115.36	3614.27	192.16	0.00	192.16	107.80	78.30	38.76	117.06	81.67	498.70
3	West Godavari	7582.74	1682.39	699.39	0.00	699.39	33.71	615.34	3.28	618.62	33.32	1385.04
	Sub Total	29269.21	11185.97	2767.54	0.00	2767.54	281.61	1330.29	42.65	1372.94	215.69	4637.78
ii)	TELANGANA											
1	Adilabad	15526.99	15526.99	49.87	0.00	49.87	86.73	775.84	176.32	952.16	26.15	1114.91
2	Karimnagar	11539.77	11530.94	11.10	0.00	11.10	197.95	782.92	4013.64	4796.56	4.96	5010.56
3	Khammam	15646.02	9996.76	412.94	0.00	412.94	237.73	401.10	283.25	684.35	62.88	1397.90
4	Medak	9489.96	9128.93	13.19	0.00	13.19	14.25	1923.66	88.37	2012.03	10.66	2050.12
5	Nizamabad	7674.38	7674.38	108.50	0.00	108.50	7.38	2860.80	15.09	2875.89	48.27	3040.04
6	Rangareddy	7358.88	505.32	0.35	0.00	0.35	0.52	54.29	0.95	55.24	1.95	58.05
7	Warangal	12447.42	6248.2	50.70	0.00	50.70	97.37	812.00	925.82	1737.82	10.59	1896.48
	Sub Total	79683.42	60611.52	646.65	0.00	646.65	641.93	7610.62	5503.43	13114.04	165.45	14568.06
iii)	KARNATAKA											
1	Bidar	5293.88	4469.12	0.30	0.00	0.30	0.00	209.64	162.82	372.46	1.72	374.48
2	Gulbarga	10687.27	0.18	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.02
	Sub Total	15981.15	4469.30	0.30	0.00	0.30	0.00	209.65	162.82	372.48	1.72	374.50
iv)	MADHYA PRADESH											
1	Balaghat	8897.36	6686.72	726.91	0.00	726.91	105.07	11.33	339.98	351.31	71.91	1255.20
2	Betul	9690.38	2129.74	86.45	0.00	86.45	14.26	90.78	164.31	255.08	63.59	419.39
3	Chhindwara	11361.38	7972.16	107.39	0.00	107.39	61.59	382.72	912.63	1295.35	117.24	1581.57
4	Mandla	7201.48	709.24	30.39	0.00	30.39	0.43	0.00	10.65	10.65	6.13	47.60
5	Seoni	8422.7	6269.58	644.06	0.00	644.06	95.12	184.85	430.85	615.70	154.39	1509.26
	Sub Total	45573.30	23767.44	1595.20	0.00	1595.20	276.46	669.67	1858.42	2528.09	413.26	4813.02
v)	CHHATISGARH											
1	Bastar	10152.59	9804.73	9.77	0.00	9.77	5.98	19.55	2.25	21.80	24.03	61.58
2	Bijapur	8511.40	8511.40	0.00	0.00	0.00	31.71	0.00	0.71	0.71	1.92	34.34
3	Dantewada	8466.39	8466.39	0.26	0.00	0.26	0.37	1.13	0.05	1.18	1.57	3.38
4	Dhamtari	3915.57	11.93	3.82	0.00	3.82	0.01	1.14	0.01	1.15	0.07	5.04
5	Durg	8287.60	30.84	2.15	0.00	2.15	0.06	1.89	0.02	1.91	0.13	4.25
6	Narayanpur	4131.46	4131.46	2.02	0.00	2.02	0.04	0.99	0.05	1.04	0.42	3.52
7	Rajnandgaon	7764.54	2218.36	160.18	0.00	160.18	5.12	146.56	4.95	151.51	5.96	322.77
8	Kanker	6567.07	4288.17	43.41	0.00	43.41	17.45	135.75	5.22	140.97	0.00	201.83
	Sub Total	57796.62	37463.28	221.61	0.00	221.61	60.74	307.00	13.26	320.26	34.10	636.71
vi)	MAHARASHTRA											
1	Ahmadnagar	16510.41	10368.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Akola	5214.95	0.23	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Amravati	11765.11	4020.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Aurangabad	9772.28	8725.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Bhandara	3719.41	3719.41	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Bid	10244.73	8798.17	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Buldana	9409.67	3796.29	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Chandrapur	10917.27	10917.27	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Gadchiroli	13966.06	13667.51	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Gondiya	5273.77	5249.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Hingoli	4514.84	4514.84	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Jalgaon	11349.74	15.66	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Jalna	7510.09	7386.59	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	Latur	7009.52	7007.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
15	Nagpur	9564.49	9564.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
16	Nanded	10260.74	10260.74	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
17	Nashik	15021.09	6973.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18	Osmanabad	7347.20	2980.50	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
19	Parbhani	6154.98	6154.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
20	Pune	15185.75	81.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
21	Thane	9208.22	3.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
22	Wardha	6084.96	6084.96	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
23	Washim	5017.05	3960.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
24	Yavatmal	13069.20	13069.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	224091.53	147320.64	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
vii)	ODISHA											
1	Kalahandi	7633.06	417.57	51.96	4.28	56.24	0.10	1.87	0.54	2.41	0.00	58.74
2	Koraput	8180.27	6693.33	328.97	381.47	710.44	12.68	68.35	7.08	75.43	0.00	798.55
3	Malkangiri	5650.92	5650.92	59.16	10.90	70.06	0.00	6.96	1.10	8.06	0.00	78.12
4	Nabarangapur	5236.39	3581.02	1.81	10.22	12.03	0.05	25.65	3.58	29.24	0.00	41.32
5	Rayagada	7126.04	871.13	14.65	44.50	59.15	4.29	5.43	0.20	5.63	0.00	69.07
	Sub Total	33826.68	17213.97	456.55	451.37	907.92	17.12	108.27	12.50	120.76	0.00	1045.80
viii)	PUDUCHERRY											
1	Yanam	36.94	36.94	4.59	0.00	4.59	0.00	0.00	0.00	0.00	0.00	4.59
	Sub Total	36.94	36.94	4.59	0.00	4.59	0.00	0.00	0.00	0.00	0.00	4.59
	Grand Total	486258.85	302069.06	5692.44	451.37	6143.81	1277.86	10235.49	7593.08	17828.57	830.22	26080.47

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
V	Basin : Krishna											
i)	ANDHRA PRADESH											
1	Anantapur	18987.72	4185.59	49.84	0.00	49.84	2.19	278.55	2.36	280.91	2.85	335.80
2	Guntur	11186.51	6545.38	2087.83	0.00	2087.83	54.60	806.75	25.32	832.08	127.05	3101.55
3	Krishna	8365.25	4686.80	1356.51	0.00	1356.51	101.03	575.97	37.03	613.01	74.35	2144.91
4	Kurnool	17503.31	9696.79	674.09	0.00	674.09	54.72	635.45	110.25	745.70	112.34	1586.85
5	Prakasam	17389.37	657.16	36.91	0.00	36.91	1.35	45.35	0.45	45.80	3.67	87.72
	Sub Total	73432.16	25771.72	4205.19	0.00	4205.19	213.89	2342.08	175.41	2517.49	320.26	7256.83
ii)	TELANGANA											
1	Hyderabad	173.43	173.43	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Karimnagar	11539.77	8.83	0.01	0.00	0.01	0.15	0.60	3.07	3.67	0.00	3.84
3	Khammam	15646.02	4864.63	200.94	0.00	200.94	115.69	195.19	137.83	333.02	30.60	680.25
4	Mahbubnagar	17974.02	17974.02	362.94	0.00	362.94	37.51	2703.91	53.32	2757.23	159.91	3317.59
5	Medak	9489.96	361.03	0.52	0.00	0.52	0.56	76.08	3.49	79.57	0.42	81.08
6	Nalgonda	13742.14	13742.14	1132.04	0.00	1132.04	213.29	2031.62	311.56	2343.18	171.62	3860.13
7	Rangareddy	7358.88	6853.56	4.70	0.00	4.70	6.99	736.35	12.83	749.18	26.40	787.28
8	Warangal	12447.42	6199.23	50.31	0.00	50.31	96.61	805.63	918.57	1724.20	10.50	1881.62
	Sub Total	88371.64	50176.87	1751.46	0.00	1751.46	470.80	6549.37	1440.68	7990.06	399.46	10611.78
iii)	KARNATAKA											
1	Bagalkot	6432.04	6432.04	546.85	0.00	546.85	0.00	1101.73	76.75	1178.48	1258.65	2983.98
2	Belgaum	13120.75	12113.73	796.76	0.00	796.76	3.15	1612.32	1521.04	3133.36	1509.36	5442.63
3	Bellary	8311.09	8311.09	1346.00	0.00	1346.00	24.52	948.48	43.56	992.04	543.73	2906.29
4	Bidar	5293.88	824.76	0.05	0.00	0.05	0.00	38.69	30.05	68.74	0.32	69.11
5	Bijapur	10261.00	10261.00	1364.14	0.00	1364.14	15.06	1198.24	776.24	1974.48	191.04	3544.72
6	Chikmagalur	7167.73	6264.50	84.86	0.00	84.86	65.58	267.56	1.56	269.13	123.28	542.86
7	Chitradurga	8360.22	8360.22	7.90	0.00	7.90	0.00	1028.96	0.00	1028.96	0.00	1036.86
8	Dakshina Kannada	4578.68	1.09	0.00	0.00	0.00	0.00	0.04	0.10	0.14	0.05	0.20
9	Davanagere	5875.62	5875.62	1258.01	0.00	1258.01	23.42	1067.16	10.80	1077.96	150.63	2510.02
10	Dharwad	4202.26	2780.03	186.96	0.00	186.96	0.00	184.30	0.00	184.30	0.00	371.27
11	Gadag	4563.79	4563.79	364.90	0.00	364.90	2.60	499.19	3.49	502.68	164.24	1034.42
12	Gulbarga	10687.27	10687.08	402.78	0.00	402.78	8.78	602.26	180.90	783.16	133.29	1328.01
13	Hassan	6789.18	1384.62	95.95	0.00	95.95	49.73	81.71	1.45	83.15	8.90	237.73
14	Haveri	4743.98	4623.62	53.18	0.00	53.18	102.39	791.16	0.21	791.37	230.68	1177.62
15	Koppal	5468.71	5468.71	654.03	0.00	654.03	1.64	1149.72	0.00	1149.72	3.43	1808.82
16	Raichur	8276.99	8276.99	2152.15	0.00	2152.15	2.57	308.81	5.01	313.82	120.66	2589.20
17	Shimoga	8361.30	5694.09	385.39	0.00	385.39	387.82	298.81	46.50	345.31	69.94	1188.46
18	Tumkur	10543.89	3897.56	15.52	0.00	15.52	36.94	549.95	3.47	553.43	0.00	605.89
19	Udupi	3841.79	3.06	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.05	0.27
20	Uttara Kannada	10048.65	664.06	0.00	0.00	0.00	4.05	5.84	6.90	12.74	9.92	26.71
21	Yadgir	5163.02	5163.02	1408.48	0.00	1408.48	35.25	170.71	93.71	264.42	77.05	1785.20
	Sub Total	152091.84	111650.68	11123.92	0.00	11123.92	763.51	11905.64	2801.96	14707.60	4595.23	31190.26
iv)	MAHARASHTRA											
1	Ahmadnagar	16510.41	6130.16	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bid	10244.73	1446.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Kolhapur	7500.31	7237.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Latur	7009.52	2.45	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Osmanabad	7347.20	4366.70	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Pune	15185.75	14790.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Raigarh	6942.67	2.53	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Ratnagiri	8050.94	14.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Sangli	8349.99	8346.19	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Satara	10223.37	10187.31	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Sindhudurg	4966.78	124.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Solapur	14495.87	14495.87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Thane	9208.22	2.55	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	126035.76	67146.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	439931.40	254746.22	17080.57	0.00	17080.57	1448.20	20797.10	4418.05	25215.15	5314.95	49058.86

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Note : (1) Totals may not tally due to rounding off.

Note : (2) Data not available.

Note : (3) Estimated on the basis of the percentage of the area of each district, within the basin, to the district as a whole.

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
VI	Basin : Cauvery											
i)	KARNATAKA											
1	Bangalore Urban	2175.82	987.82	0.00	0.00	0.00	0.00	54.78	0.00	54.78	0.00	54.78
2	Bangalore Rural	2294.62	978.92	0.00	0.00	0.00	0.00	108.95	0.00	108.95	0.18	109.13
3	Chamarajanagar	5688.19	5688.19	186.60	0.00	186.60	33.22	385.29	23.40	408.69	0.00	628.51
4	Chikkaballapura	4188.56	6.40	0.00	0.00	0.00	0.00	0.84	0.00	0.84	0.00	0.84
5	Chikmagalur	7167.73	751.01	10.17	0.00	10.17	7.86	32.08	0.19	32.26	14.78	65.08
6	Hassan	6789.18	4941.78	342.44	0.00	342.44	177.49	291.62	5.16	296.78	31.75	848.46
7	Kodagu	4115.60	2898.68	8.63	0.00	8.63	0.35	1.37	0.00	1.37	1.17	11.53
8	Mandya	4942.61	4942.61	1051.88	0.00	1051.88	185.63	188.32	95.25	283.57	21.21	1542.29
9	Mysore	6319.07	6319.07	990.97	0.00	990.97	185.45	344.71	182.10	526.81	2.15	1705.38
10	Ramanagara	3511.62	3511.62	93.12	0.00	93.12	20.76	294.51	0.00	294.51	4.63	413.02
11	Tumkur	10543.89	3992.00	15.90	0.00	15.90	37.83	563.28	3.56	566.84	0.00	620.57
	Sub Total	57736.89	35018.10	2699.71	0.00	2699.71	648.60	2265.75	309.66	2575.41	75.87	5999.59
ii)	KERALA											
1	Idukki	5106.26	385.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Kannur	2957.80	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Kozhikode	2347.84	4.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Malappuram	3599.11	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Palakkad	4542.91	619.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Wayanad	2141.18	1936.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	20695.10	2948.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
iii)	TAMIL NADU											
1	Ariyalur	1970.10	1623.55	72.08	0.00	72.08	17.37	242.09	40.44	282.53	0.00	371.98
2	Coimbatore	4708.71	2569.37	115.15	0.00	115.15	0.00	170.40	341.31	511.71	4.28	631.14
3	Cuddalore	3725.96	604.91	81.09	0.00	81.09	6.99	219.83	9.88	229.71	1.90	319.69
4	Dharmapuri	4529.54	1906.74	1.28	0.00	1.28	3.15	4.89	288.87	293.76	0.00	298.18
5	Dindigul	6164.99	4429.05	18.18	0.00	18.18	32.87	31.17	656.00	687.17	8.28	746.50
6	Erode	5802.54	5802.54	446.72	0.00	446.72	0.00	306.38	676.99	983.37	4.02	1434.11
7	Karur	2928.71	2928.71	137.70	0.00	137.70	0.10	107.84	299.07	406.91	0.00	544.71
8	Krishnagiri	5142.53	1909.10	3.65	0.00	3.65	30.52	77.85	159.15	237.00	0.00	271.17
9	Nagapattinam	2516.24	2516.20	1524.25	0.00	1524.25	0.00	0.00	0.00	0.00	7.18	1531.43
10	Namakkal	3434.37	3074.96	58.94	0.00	58.94	0.00	114.89	710.70	825.59	9.73	894.27
11	Perambalur	1768.81	625.19	0.00	0.00	0.00	7.58	11.44	96.36	107.80	0.00	115.38
12	Pudukkottai	4740.11	734.16	7.01	0.00	7.01	79.21	49.82	7.95	57.77	0.00	143.98
13	Salem	5247.41	3027.08	1.59	0.00	1.59	0.00	123.12	614.62	737.73	0.00	739.32
14	Thanjavur	3438.78	2221.95	1149.24	0.00	1149.24	0.34	412.01	1.49	413.50	0.00	1563.08
15	The Nilgiris	2572.79	2213.40	0.00	0.00	0.00	0.00	0.00	4.86	4.86	0.00	4.86
16	Thiruvavur	2302.70	2300.40	2148.68	0.00	2148.68	0.00	0.00	0.00	0.00	0.00	2148.68
17	Tiruchirappalli	4564.08	4032.11	345.59	0.00	345.59	26.42	84.32	319.59	403.92	0.00	775.93
18	Tiruppur	5266.55	4983.33	238.56	2.27	240.83	12.40	146.38	725.29	871.67	0.00	1124.91
	Sub Total	70824.92	47502.75	6349.70	2.27	6351.97	216.97	2102.45	4952.55	7055.00	35.40	13659.33
iv)	PONDICHERY											
1	Karaikal	154.98	154.98	43.05	0.00	43.05	0.00	5.28	0.00	5.28	0.14	48.47
	Sub Total	154.98	154.98	43.05	0.00	43.05	0.00	5.28	0.00	5.28	0.14	48.47
	Grand Total	149411.89	85624.23	9092.46	2.27	9094.73	865.56	4373.48	5262.20	9635.68	111.41	19707.39
VII	Basin : Pennar											
i)	ANDHRA PRADESH											
1	Anantapur	18987.72	14802.13	176.26	0.00	176.26	7.75	985.08	8.34	993.42	10.10	1187.52
2	Chittoor	14957.01	4929.17	8.82	0.00	8.82	41.56	449.96	57.84	507.80	0.27	558.44
3	Kurnool	17503.31	7747.18	538.56	0.00	538.56	43.72	507.69	88.08	595.77	89.75	1267.80
4	Prakasam	17389.37	945.21	53.08	0.00	53.08	1.94	65.23	0.64	65.87	5.28	126.17
5	SPSR Nellore	13090.71	4151.44	449.11	0.00	449.11	158.97	287.20	26.30	313.51	23.76	945.34
6	YSR Kadapa	14969.72	14877.73	221.46	0.00	221.46	3.54	1329.61	12.60	1342.21	23.08	1590.29
	Sub Total	96897.84	47452.86	1447.29	0.00	1447.29	257.47	3624.77	193.80	3818.58	152.22	5675.56
ii)	KARNATAKA											
1	Bangalore Rural	2294.62	380.08	0.00	0.00	0.00	0.00	42.30	0.00	42.30	0.07	42.37
2	Chikkaballapura	4188.56	3367.63	0.00	0.00	0.00	0.00	440.49	0.00	440.49	0.00	440.49
3	Kolar	3968.44	388.52	0.00	0.00	0.00	0.00	25.60	0.00	25.60	0.00	25.60
4	Tumkur	10543.89	2654.33	10.57	0.00	10.57	25.16	374.53	2.37	376.90	0.00	412.62
	Sub Total	20995.51	6790.56	10.57	0.00	10.57	25.16	882.92	2.37	885.28	0.07	921.08
	Grand Total	117893.35	54243.42	1457.86	0.00	1457.86	282.63	4507.69	196.17	4703.86	152.30	6596.64

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
VIII Basin : East Flowing Rivers from Mahanadi to Pennar												
i) ANDHRA PRADESH												
1	East Godavari	10571.11	4681.80	1491.35	0.00	1491.35	111.37	506.11	0.48	506.60	80.05	2189.37
2	Guntur	11186.51	4641.13	1480.42	0.00	1480.42	38.71	572.05	17.96	590.00	90.08	2199.22
3	Krishna	8365.25	3678.45	1064.67	0.00	1064.67	79.30	452.06	29.07	481.12	58.36	1683.44
4	Kurnool	17503.31	59.34	4.13	0.00	4.13	0.33	3.89	0.67	4.56	0.69	9.71
5	Prakasam	17389.37	15786.99	886.58	0.00	886.58	32.42	1089.47	10.71	1100.18	88.11	2107.29
6	SPSR Nellore	13090.71	2848.33	308.14	0.00	308.14	109.07	197.05	18.05	215.10	16.30	648.60
7	Srikakulam	5730.80	5730.80	1182.51	0.00	1182.51	639.61	127.08	149.86	276.94	65.61	2164.67
8	Visakhapatnam	11115.36	7501.09	398.80	0.00	398.80	223.74	162.51	80.45	242.96	169.51	1035.00
9	Vizianagaram	5821.45	5821.45	450.31	0.00	450.31	849.12	391.20	127.50	518.70	41.22	1859.35
10	West Godavari	7582.74	5900.34	2452.84	0.00	2452.84	118.24	2158.07	11.50	2169.57	116.86	4857.50
	Sub Total	108356.61	56649.72	9719.74	0.00	9719.74	2201.90	5659.48	446.25	6105.73	726.78	18754.15
ii) TELANGANA												
1	Khammam	15646.02	784.64	32.41	0.00	32.41	18.66	31.48	22.23	53.71	4.94	109.72
	Sub Total	15646.02	784.64	32.41	0.00	32.41	18.66	31.48	22.23	53.71	4.94	109.72
iii) ODISHA												
1	Gajapati	3928.20	3928.20	0.71	168.76	169.47	90.23	13.34	0.10	13.44	0.00	273.14
2	Ganjam	8197.71	7698.21	1059.18	441.05	1500.24	343.74	47.40	4.94	52.34	0.00	1896.32
3	Kalahandi	7633.06	645.40	80.31	6.61	86.92	0.15	2.89	0.83	3.72	0.00	90.79
4	Kandhamal	7770.03	1962.90	0.65	4.75	5.40	0.19	1.73	0.47	2.20	0.00	7.79
5	Khordha	2654.72	192.40	13.71	0.13	13.84	0.77	1.04	0.13	1.17	0.00	15.79
6	Koraput	8180.27	1486.94	73.08	84.74	157.82	2.82	15.19	1.57	16.76	0.00	177.40
7	Nayagarh	3755.00	296.34	4.01	4.00	8.01	0.19	1.00	0.21	1.21	0.00	9.41
8	Rayagada	7126.04	6150.44	103.42	314.22	417.64	30.29	38.31	1.42	39.73	0.00	487.67
	Sub Total	49245.03	22360.83	1335.08	1024.27	2359.35	468.38	120.90	9.67	130.57	0.00	2958.30
	Grand Total	173247.66	79795.19	11087.23	1024.27	12111.51	2688.94	5811.86	478.15	6290.01	731.72	21822.17
IX Basin : East Flowing Rivers from Pennar to Kanyakumari												
i) ANDHRA PRADESH												
1	Chittoor	14957.01	10027.85	17.93	0.00	17.93	84.54	915.39	117.66	1033.05	0.54	1136.08
2	SPSR Nellore	13090.71	6090.94	658.93	0.00	658.93	233.23	421.38	38.59	459.97	34.85	1386.99
3	YSR Cudappah	14969.72	92.00	1.37	0.00	1.37	0.02	8.22	0.08	8.30	0.14	9.83
	Sub Total	43017.44	16210.79	678.23	0.00	678.23	317.80	1345.00	156.33	1501.33	35.54	2532.90
ii) KARNATAKA												
1	Bangalore Urban	2175.82	1188.00	0.00	0.00	0.00	0.00	65.89	0.00	65.89	0.00	65.89
2	Bangalore Rural	2294.62	935.62	0.00	0.00	0.00	0.00	104.13	0.00	104.13	0.18	104.31
3	Chikkaballapura	4188.56	814.53	0.00	0.00	0.00	0.00	106.54	0.00	106.54	0.00	106.54
4	Kolar	3968.44	3579.91	0.00	0.00	0.00	0.00	235.84	0.00	235.84	0.00	235.84
	Sub Total	12627.44	6518.06	0.00	0.00	0.00	0.00	512.40	0.00	512.40	0.18	512.58
iii) KERALA												
1	Idukki	5106.26	38.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Kollam	2556.16	11.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Pathanamthitta	2709.55	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Thiruvananthapuram	2246.81	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	12618.78	59.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
iv) TAMIL NADU												
1	Ariyalur	1970.10	346.55	15.38	0.00	15.38	3.71	51.68	8.63	60.31	0.00	79.40
2	Chennai	128.00	128.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	Cuddalore	3725.96	3121.05	418.40	0.00	418.40	36.05	1134.22	50.96	1185.18	9.83	1649.46
4	Dharmapuri	4529.54	2622.80	1.75	0.00	1.75	4.34	397.35	397.35	404.07	0.00	410.17
5	Dindigul	6164.99	1735.94	7.13	0.00	7.13	12.89	12.22	257.11	269.33	3.24	292.59
6	Kancheepuram	4475.20	4475.19	2.00	0.00	2.00	400.11	95.68	372.09	467.77	0.00	869.88
7	Kanniyakumari	1746.80	70.81	4.24	0.00	4.24	6.04	2.58	1.06	3.65	0.00	13.92
8	Krishnagiri	5142.53	3233.43	6.19	0.00	6.19	51.70	131.86	269.54	401.40	0.00	459.29
9	Madurai	3767.70	3767.63	189.98	0.00	189.98	185.00	6.97	424.68	431.65	0.00	806.63
10	Namakkal	3434.37	359.41	6.89	0.00	6.89	0.00	13.43	83.07	96.50	1.14	104.52
11	Perambalur	1768.81	1143.62	0.00	0.00	0.00	13.86	20.94	176.26	197.20	0.00	211.06
12	Pudukkottai	4740.11	4005.95	38.22	0.00	38.22	432.19	271.87	43.35	315.22	0.00	785.64
13	Ramanathapuram	4040.52	4040.51	0.00	0.00	0.00	523.98	18.86	127.49	146.35	0.00	670.33
14	Salem	5247.41	2220.33	1.16	0.00	1.16	0.00	90.30	450.81	541.12	0.00	542.28
15	Sivaganga	4325.62	4325.62	0.00	0.00	0.00	547.66	39.65	140.96	180.61	0.00	728.27
16	Thanjavur	3438.78	1216.83	629.37	0.00	629.37	0.19	225.64	0.81	226.45	0.00	856.01
17	Theni	2909.55	2907.60	149.77	0.00	149.77	16.47	117.27	448.21	565.48	0.00	731.72
18	Thiruvallur	3377.77	3377.77	1.37	0.00	1.37	236.24	996.40	95.30	1091.70	0.00	1329.31
19	Thoothukkudi	4763.91	4763.91	148.57	1.34	149.91	71.11	3.45	169.08	172.53	1.35	394.90
20	Tiruchirappalli	4564.08	531.97	45.59	0.00	45.59	3.49	11.13	42.17	53.29	0.00	102.37
21	Tirunelveli	6998.99	6982.02	266.22	0.00	266.22	488.57	13.74	630.43	644.16	0.00	1398.96
22	Tiruvannamalai	6187.67	6187.67	1.15	0.00	1.15	18.64	23.87	1835.50	1859.37	0.00	1879.16
23	Vellore	6056.53	6056.53	0.00	0.00	0.00	0.85	136.91	880.16	1017.07	0.00	1017.92
24	Viluppuram	7211.86	7211.85	12.07	0.00	12.07	370.67	645.40	2480.99	3126.39	0.00	3509.13
25	Virudhunagar	4487.16	4487.15	0.00	0.00	0.00	198.02	3.13	313.70	316.83	0.00	514.85
	Sub Total	105203.96	79320.14	1945.46	1.34	1946.80	3621.76	4073.90	9699.73	13773.63	15.56	19357.75
v) PUDUCHERRY												
1	Pondicherry	301.19	301.19	0.00	0.00	0.00	0.00	163.69	0.00	163.69	0.00	163.69
	Sub Total	301.19	301.19	0.00	0.00	0.00	0.00	163.69	0.00	163.69	0.00	163.69
	Grand Total	173768.81	102409.24	2623.69	1.34	2625.03	3939.56	6094.99	9856.06	15951.05	51.27	22566.91

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
X	Basin : Narmada											
i)	GUJARAT											
1	Bharuch	5083.67	1849.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Dohad	3458.35	60.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Narmada	2719.36	2321.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Panch Mahals	5095.62	137.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Surat	4174.64	168.82	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Vadodara	7234.95	3788.50	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	27766.59	8326.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH											
1	Alirajpur	3217.78	3001.03	22.91	1.89	24.80	47.94	12.54	162.27	174.81	105.61	353.16
2	Anuppur	3637.40	517.37	1.23	0.00	1.23	0.15	2.19	1.73	3.92	4.57	9.86
3	Balaghat	8897.36	2210.54	240.31	0.00	240.31	34.73	3.74	112.39	116.14	23.77	414.95
4	Barwani	5234.28	3841.08	39.81	0.00	39.81	6.69	248.06	408.03	656.09	201.99	904.58
5	Betul	9690.38	3712.61	150.71	0.00	150.71	24.86	158.24	286.42	444.66	110.86	731.08
6	Bhopal	2618.98	3.33	0.06	0.00	0.06	0.04	0.52	0.43	0.95	0.31	1.37
7	Burhanpur	3084.12	368.60	0.00	0.00	0.00	0.58	27.28	40.20	67.48	4.19	72.24
8	Chhindwara	11361.38	3389.22	45.65	0.00	45.65	26.19	162.71	387.99	550.70	49.84	672.38
9	Damoh	7068.37	417.79	13.98	0.00	13.98	5.80	24.04	26.03	50.07	50.19	120.03
10	Dewas	6700.19	3740.87	31.79	0.00	31.79	78.77	855.46	639.68	1495.14	97.14	1702.85
11	Dhar	7842.30	4756.36	189.08	0.00	189.08	156.94	1117.48	630.35	1747.83	299.04	2392.88
12	Dindori	5543.20	4598.04	11.17	0.00	11.17	0.23	0.08	6.45	6.54	12.32	30.26
13	East Nimar (Khandwa)	7169.74	6469.19	266.77	0.00	266.77	60.36	278.54	1016.76	1295.29	251.27	1873.70
14	Harda	3192.55	3127.44	950.94	0.00	950.94	2.11	231.32	328.03	559.35	253.66	1766.06
15	Hoshangabad	6456.42	6456.42	1998.01	0.00	1998.01	41.05	1565.65	667.27	2232.92	204.92	4476.90
16	Indore	3765.95	1013.68	6.19	0.00	6.19	8.03	502.07	32.17	534.25	22.62	571.08
17	Jabalpur	4911.29	4619.32	185.96	0.00	185.96	11.16	1325.58	399.38	1724.95	195.29	2117.36
18	Jhabua	3302.18	7.92	0.38	0.00	0.38	0.33	0.06	0.42	0.49	0.45	1.65
19	Katni	4867.17	1093.93	39.00	0.00	39.00	8.32	47.99	121.35	169.34	151.01	367.67
20	Mandla	7201.48	6371.63	272.99	0.00	272.99	3.85	0.00	95.69	95.69	55.07	427.60
21	Narsinghpur	4947.28	4818.19	86.09	0.00	86.09	0.06	2102.32	362.62	2464.95	188.80	2739.90
22	Raisen	8172.10	4494.04	545.81	0.00	545.81	20.06	1104.63	272.97	1377.60	430.61	2374.07
23	Sagar	9858.18	371.79	4.21	0.00	4.21	2.04	28.43	72.30	100.74	31.64	138.63
24	Sehore	6317.41	3143.66	396.34	0.00	396.34	124.06	628.41	520.56	1148.97	249.14	1918.51
25	Seoni	8422.70	2153.12	221.19	0.00	221.19	32.66	63.48	147.96	211.44	53.02	518.32
26	Umaria	4411.61	0.47	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.04
27	West Nimar (Khargone)	7757.16	7397.29	924.93	0.00	924.93	0.00	895.58	1353.05	2248.63	416.89	3590.45
	Sub Total	165648.96	82094.93	6645.51	1.89	6647.40	697.00	11386.43	8092.52	19478.95	3464.23	30287.58
iii)	CHHATISGARH											
1	Bilaspur	8022.86	0.71	0.06	0.00	0.06	0.00	0.03	0.00	0.03	0.00	0.09
2	Kaberdham	4061.73	596.41	26.78	0.00	26.78	0.10	114.86	0.49	115.35	3.73	145.95
3	Rajnandgaon	7764.54	78.58	5.67	0.00	5.67	0.18	5.19	0.18	5.37	0.21	11.43
	Sub Total	19849.13	675.70	32.51	0.00	32.51	0.29	120.08	0.67	120.75	3.94	157.48
iv)	MAHARASHTRA											
1	Dhule	6925.51	7.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Nandurbar	5684.20	1572.12	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	12609.71	1580.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	225874.39	92677.05	6678.02	1.89	6679.91	697.29	11506.51	8093.18	19599.69	3468.17	30445.06
XI	Basin : Tapi											
i)	GUJARAT											
1	Narmada	2719.36	398.16	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bharuch	5083.67	1034.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Surat	4174.64	2654.37	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Tapi	3040.24	1686.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	The Dangs	1700.82	25.75	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	16718.73	5798.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH											
1	Harda	3192.55	65.11	19.80	0.00	19.80	0.04	4.82	6.83	11.65	5.28	36.77
2	Burhanpur	3084.12	2715.52	0.00	0.00	0.00	4.27	200.96	296.15	497.11	30.83	532.22
3	Betul	9690.38	3848.03	156.20	0.00	156.20	25.76	164.01	296.87	460.88	114.90	757.75
4	East Nimar (Khandwa)	7169.74	700.55	28.89	0.00	28.89	6.54	30.16	110.10	140.27	27.21	202.90
5	West Nimar (Khargone)	7757.16	359.87	45.00	0.00	45.00	0.00	43.57	65.82	109.39	20.28	174.67
6	Barwani	5234.28	1393.21	14.44	0.00	14.44	2.43	89.98	148.00	237.97	73.26	328.10
	Sub Total	36128.23	9082.29	264.33	0.00	264.33	39.04	533.50	923.78	1457.27	271.77	2032.41
iii)	MAHARASHTRA											
1	Washim	5017.05	1056.31	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Nashik	15021.09	5959.21	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Nandurbar	5684.20	4111.38	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Jalna	7510.09	123.51	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Jalgaon	11349.74	11334.09	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Dhule	6925.51	6864.04	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Buldana	9409.67	5613.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Aurangabad	9772.28	1046.84	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Akola	5214.95	5214.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Amravati	11765.11	7744.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	87669.69	49067.70	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	140516.65	63948.72	264.33	0.00	264.33	39.04	533.50	923.78	1457.27	271.77	2032.41

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
XII Basin : West Flowing Rivers from Tapi to Tadri												
i) DADRA & NAGAR HAVELI												
1	Dadra & Nagar Haveli	477.07	477.07	20.82	0.00	20.82	0.00	2.15	19.35	21.50	34.91	77.23
	Sub Total	477.07	477.07	20.82	0.00	20.82	0.00	2.15	19.35	21.50	34.91	77.23
ii) DAMAN & DIU												
1	Daman	70.98	70.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	70.98	70.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
iii) GOA												
1	North Goa	1650.18	1650.18	56.12	0.00	56.12	124.41	30.76	13.40	44.16	12.10	236.79
2	South Goa	1917.11	1917.11	31.52	0.00	31.52	81.89	17.10	12.30	29.40	8.40	151.21
	Sub Total	3567.29	3567.29	87.64	0.00	87.64	206.30	47.86	25.70	73.56	20.50	388.00
iv) GUJARAT												
1	Navsari	2146.71	2146.71	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Surat	4174.64	1351.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Tapi	3040.24	1354.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	The Dangs	1700.82	1675.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Valsad	2894.91	2894.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	13957.32	9422.26	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
KARNATAKA												
1	Belgaum	13120.75	1007.02	66.24	0.00	66.24	0.26	134.03	126.45	260.48	125.47	452.45
2	Dharwad	4202.26	1422.24	95.65	0.00	95.65	0.00	94.29	0.00	94.29	0.00	189.94
3	Haveri	4743.98	120.36	1.38	0.00	1.38	2.67	20.59	0.01	20.60	6.01	30.66
4	Shimoga	8361.30	15.01	1.02	0.00	1.02	1.02	0.79	0.12	0.91	0.18	3.13
5	Uttara Kannada	10048.65	8350.89	0.00	0.00	0.00	50.96	73.46	86.72	160.18	124.81	335.95
	Sub Total	40476.94	10915.52	164.28	0.00	164.28	54.91	323.17	213.29	536.46	256.47	1012.12
vi) MAHARASHTRA												
1	Ahmadnagar	16510.41	12.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Dhule	6925.51	53.52	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Kolhapur	7500.31	262.87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Mumbai	144.60	144.60	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Mumbai (Suburban)	438.28	438.28	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Nandurbar	5684.20	0.69	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Nashik	15021.09	2088.62	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Pune	15185.75	313.94	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Raigarh	6942.67	6940.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Ratnagiri	8050.94	8036.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Sangli	8349.99	3.80	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Satara	10223.37	36.06	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Sindhudurg	4966.78	4842.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	Thane	9208.22	9202.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	115152.12	32375.79	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	173701.72	56828.91	272.74	0.00	272.74	261.21	373.18	258.34	631.52	311.88	1477.35
XIII Basin : West Flowing Rivers from Tadri to Kanyakumari												
KARNATAKA												
1	Chikmagalur	7167.73	152.22	2.06	0.00	2.06	1.59	6.50	0.04	6.54	3.00	13.19
2	Dakshina Kannada	4578.68	4577.59	0.00	0.00	0.00	0.00	167.37	426.14	593.51	229.39	822.89
3	Hassan	6789.18	462.78	32.07	0.00	32.07	16.62	27.31	0.48	27.79	2.97	79.46
4	Kodagu	4115.60	1216.92	3.63	0.00	3.63	0.15	0.58	0.00	0.58	0.49	4.84
5	Shimoga	8361.30	2652.20	179.51	0.00	179.51	180.64	139.18	21.66	160.84	32.58	553.56
6	Udupi	3841.79	3838.73	0.00	0.00	0.00	4.53	5.20	264.44	269.64	61.99	336.15
7	Uttara Kannada	10048.65	1033.70	0.00	0.00	0.00	6.31	9.09	10.73	19.83	15.45	41.59
	Sub Total	44902.93	13934.14	217.26	0.00	217.26	209.84	355.23	723.49	1078.72	345.86	1851.68
KERALA												
1	Alappuzha	1454.48	1454.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Ernakulam	2454.58	2454.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Idukki	5106.26	4682.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Kannur	2957.80	2956.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Kasaragod	1964.67	1964.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Kollam	2556.16	2544.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Kottayam	2258.83	2258.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Kozhikode	2347.84	2343.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Malappuram	3599.11	3597.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Palakkad	4542.91	3923.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Pathanamthitta	2709.55	2704.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Thiruvananthapuram	2246.81	2242.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Thrissur	3071.57	3071.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Wayanad	2141.18	205.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	39411.75	36404.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TAMIL NADU												
1	Coimbatore	4708.71	2139.34	95.88	0.00	95.88	0.00	141.88	284.18	426.06	3.57	525.51
2	Kanniyakumari	1746.80	1675.98	100.32	0.00	100.32	142.95	61.17	25.11	86.28	0.00	329.55
3	The Nilgiris	2572.79	359.39	0.00	0.00	0.00	0.00	0.79	0.79	0.79	0.00	0.79
4	Theni	2909.55	1.95	0.10	0.00	0.10	0.01	0.08	0.30	0.38	0.00	0.49
5	Tirunelveli	6998.99	16.96	0.65	0.00	0.65	1.19	0.03	1.53	1.56	0.00	3.40
6	Tiruppur	5266.55	283.22	13.56	0.13	13.69	0.71	8.32	41.22	49.54	0.00	63.93
7	Virudhunagar	4487.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	28690.55	4476.84	210.50	0.13	210.63	144.85	211.49	353.13	564.62	3.57	923.67
PONDICHERY												
1	Mahe	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27
	Sub Total	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27
	Grand Total	113015.13	54825.15	427.77	0.13	427.90	354.69	566.71	1076.63	1643.34	349.70	2775.62

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 15 : Gross Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
XIV Basin : Mahi												
i)	GUJARAT											
1	Anand	2806.43	996.53	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bharuch	5083.67	2199.42	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Dohad	3458.35	3397.99	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Kheda	3843.53	518.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Panch Mahals	5095.62	4889.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Sabar Kantha	7140.29	26.43	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Vadodara	7234.95	3446.45	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	34662.84	15474.34	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH											
1	Alirajpur	3217.78	216.75	1.65	0.14	1.79	3.46	0.91	11.72	12.63	7.63	25.51
2	Dhar	7842.30	1505.16	59.83	0.00	59.83	49.66	353.63	199.48	553.10	94.63	757.23
3	Jhabua	3302.18	3294.25	157.83	0.00	157.83	137.48	26.59	176.72	203.31	188.48	687.10
4	Neemuch	4001.43	29.18	0.47	0.00	0.47	0.11	2.12	6.26	8.38	0.38	9.34
5	Ratlam	4639.98	1820.86	23.98	0.00	23.98	17.86	364.75	319.60	684.34	86.08	812.27
	Sub Total	23003.67	6866.20	243.76	0.14	243.90	208.57	747.99	713.78	1461.77	377.20	2291.44
iii)	RAJASTHAN											
1	Banswara	4332.72	4332.72	631.30	0.00	631.30	46.82	39.69	165.08	204.77	229.30	1112.19
2	Chittaurgarh	7500.49	133.03	1.87	0.00	1.87	0.51	22.90	20.43	43.33	0.37	46.08
3	Dungarpur	3640.43	3042.56	63.07	0.00	63.07	22.44	53.95	250.44	304.39	18.65	408.54
4	Pratapgarh	4141.45	2993.52	61.61	0.00	61.61	4.03	168.87	587.33	756.19	22.88	844.71
5	Udaipur	11459.12	5494.69	17.14	0.00	17.14	54.77	64.11	355.88	419.99	5.50	497.41
	Sub Total	31074.21	15996.52	774.98	0.00	774.98	128.58	349.52	1379.15	1728.67	276.70	2908.93
	Grand Total	88740.72	38337.06	1018.75	0.14	1018.88	337.15	1097.51	2092.93	3190.44	653.90	5200.37
XV Basin: Sabarmati												
i)	GUJARAT											
1	Ahmedabad	7712.66	4718.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Anand	2806.43	1785.66	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Banaskantha	10247.55	506.28	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Bhavnagar	8062.74	213.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Gandhinagar	2055.07	2055.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Kheda	3843.53	3325.40	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Mahesana	4244.35	2087.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Panchmahal	5095.62	68.67	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Rajkot	10762.12	261.22	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Sabarkantha	7140.29	7113.86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Surendranagar	10116.24	4603.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	72086.60	26738.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	RAJASTHAN											
1	Dungarpur	3640.43	597.87	12.39	0.00	12.39	4.41	10.60	49.21	59.81	3.66	80.28
2	Sirohi	4961.34	54.66	0.08	0.00	0.08	0.06	1.06	10.21	11.27	0.00	11.40
3	Udaipur	11459.12	3289.85	10.26	0.00	10.26	32.79	38.39	213.08	251.46	3.30	297.82
	Sub Total	20060.89	3942.38	22.74	0.00	22.74	37.26	50.05	272.49	322.54	6.96	389.50
	Grant Total	92147.49	30680.58	22.74	0.00	22.74	37.26	50.05	272.49	322.54	6.96	389.50
XVI Basin : WFR of Kutch, Saurashtra Including Luni												
i)	GUJARAT											
1	Ahmadabad	7712.66	2994.60	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Amreli	7100.01	7100.01	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Anand	2806.43	24.24	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Banas Kantha	10247.55	9741.27	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Bhavnagar	8062.74	7849.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Jamnagar	10490.91	10490.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Junagadh	8497.29	8497.29	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Kachchh	40508.20	40508.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Mahesana	4244.35	2156.99	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Patan	5431.61	5431.61	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Porbandar	2203.38	2203.38	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Rajkot	10762.12	10500.90	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Surendranagar	10116.24	5512.88	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	128183.49	113011.77	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	RAJASTHAN											
1	Ajmer	8206.23	1870.76	12.51	0.00	12.51	15.37	16.24	305.73	321.96	42.58	392.42
2	Barmer	27351.28	20773.88	167.86	0.00	167.86	0.00	778.59	1469.31	2247.89	0.01	2415.76
3	Bhilwara	10052.59	2.23	0.04	0.00	0.04	0.02	0.05	0.48	0.53	0.00	0.59
4	Chittaurgarh	7500.49	36.42	0.51	0.00	0.51	0.14	6.27	5.59	11.86	0.10	12.62
5	Jaisalmer	37070.06	2021.38	100.22	0.00	100.22	0.00	65.53	0.81	66.33	0.00	166.55
6	Jalor	10322.33	10322.33	746.07	0.00	746.07	0.31	1811.40	981.34	2792.74	0.00	3539.12
7	Jodhpur	22037.60	13324.02	2.01	0.00	2.01	0.00	3767.03	19.61	3786.63	6.30	3794.94
8	Nagaur	17026.59	6096.23	0.00	0.00	0.00	0.00	1030.21	310.98	1341.20	0.09	1341.28
9	Pali	11890.23	11890.23	1.05	0.00	1.05	104.77	266.76	1026.65	1293.41	1.32	1400.55
10	Rajsamand	4485.42	364.89	0.11	0.00	0.11	1.47	1.27	37.77	39.04	0.01	40.62
11	Sikar	7428.38	2.75	0.00	0.00	0.00	0.00	0.97	0.10	1.07	0.00	1.07
12	Sirohi	4961.34	4906.68	7.08	0.00	7.08	5.36	95.21	916.12	1011.33	0.00	1023.78
13	Udaipur	11459.12	205.67	0.64	0.00	0.64	2.05	2.40	13.32	15.72	0.21	18.62
	Sub Total	179791.66	71817.47	1038.10	0.00	1038.10	129.48	7841.93	5087.80	12929.73	50.62	14147.92
iii)	Daman & Diu											
1	Diu	34.39	34.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	34.39	34.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grant Total	308009.54	184863.63	1038.10	0.00	1038.10	129.48	7841.93	5087.80	12929.73	50.62	14147.92

Sources : India-WRIS, Directorate of Economics & Statistics, Ministry of Agriculture (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
I	Basin : Mahanadi											
i)	JHARKHAND											
	Simdega	3639.71	145.66	0.20	0.00	0.20	0.10	0.14	0.36	0.50	0.55	1.35
	Sub Total	3639.71	145.66	0.20	0.00	0.20	0.10	0.14	0.36	0.50	0.55	1.35
ii)	ODISHA											
1	Anugul	6129.61	2060.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.08	36.08
2	Balangir	6332.43	6332.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.37	74.37
3	Bargarh	5583.76	5583.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	987.15	987.15
4	Baudh	3006.39	3006.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	186.58	186.58
5	Cuttack	3802.97	3683.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	802.90	802.90
6	Debagarh	2726.66	271.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.11	8.11
7	Dhenkanal	4310.65	660.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.33	15.33
8	Ganjam	8197.71	499.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120.35	120.35
9	Jagatsinghpur	1678.55	1678.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	597.57	597.57
10	Jajapur	2792.19	41.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.45	4.45
11	Jharsuguda	2036.85	2036.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.80	19.80
12	Kalahandi	7633.06	6570.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	623.86	623.86
13	Kandhamal	7770.03	5807.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.85	21.85
14	Kendrapara	2388.95	1292.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	242.71	242.71
15	Khordha	2654.72	2462.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	192.80	192.80
16	Nabarangapur	5236.39	1655.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.47	18.47
17	Nayagarh	3755.00	3458.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.06	109.06
18	Nuapada	3728.43	3728.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.26	84.26
19	Puri	3433.02	3433.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	847.68	847.68
20	Rayagada	7126.04	104.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	7.44
21	Sambalpur	6479.54	5266.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	281.32	281.32
22	Subarnapur	2271.97	2271.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	504.13	504.13
23	Sundargarh	9353.52	3941.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.19	48.19
	Sub Total	108428.44	65847.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5834.44	5834.44
iii)	MADHYA PRADESH											
1	Anuppur	3637.40	121.78	0.29	0.00	0.29	0.03	0.52	0.41	0.92	1.08	2.32
2	Balaghat	8897.36	0.10	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02
3	Dindori	5543.20	27.29	0.07	0.00	0.07	0.00	0.00	0.04	0.04	0.07	0.18
4	Mandla	7201.48	2.50	0.11	0.00	0.11	0.00	0.00	0.04	0.04	0.02	0.17
	Sub Total	25279.44	151.67	0.47	0.00	0.47	0.04	0.52	0.49	1.00	1.17	2.68
iv)	CHHATISGARH											
1	Bastar	10152.59	347.86	0.35	0.00	0.35	0.21	0.69	0.08	0.77	0.85	2.18
2	Bilaspur	8022.86	7190.01	515.86	0.00	515.86	34.27	208.53	18.25	226.77	1.11	778.01
3	Dhamtari	3915.57	3903.65	886.64	0.00	886.64	2.85	196.25	4.11	200.36	20.43	1110.28
4	Durg	8287.60	8256.76	576.54	0.00	576.54	14.81	291.55	6.42	297.97	32.84	922.16
5	Jashpur	5583.19	3918.09	1362.24	0.00	1362.24	11.67	32.83	3.31	36.14	24.93	1417.57
6	Janjgir-Champa	3723.65	3723.65	46.11	0.00	46.11	1.94	1.47	19.04	20.51	24.93	93.49
7	Kabeertham	4061.73	3465.32	127.53	0.00	127.53	0.33	403.36	2.19	405.55	18.10	551.51
8	Korba	6333.50	6333.17	46.08	0.00	46.08	4.89	3.30	8.22	11.52	21.19	83.68
9	Koriya	6383.21	2478.01	16.45	0.00	16.45	0.86	5.60	3.68	9.28	4.79	31.38
10	Mahasamund	4559.96	4559.96	390.43	0.00	390.43	66.48	478.16	7.71	485.87	47.68	990.46
11	Raigarh	6819.11	6818.53	186.53	0.00	186.53	42.91	319.57	6.67	326.24	72.14	627.83
12	Raipur	11995.63	11995.63	1105.99	0.00	1105.99	39.80	211.01	5.52	216.53	24.88	1387.20
13	Rajnandgaon	7764.54	5467.60	314.65	0.00	314.65	10.16	224.89	9.05	233.93	11.63	570.38
14	Surguja	15125.37	2477.40	8.34	0.00	8.34	0.69	0.96	2.26	3.23	13.76	26.02
15	Kanker	6567.07	2278.90	23.07	0.00	23.07	9.28	72.14	2.77	74.91	0.00	107.26
	Sub Total	109295.58	73214.54	5606.81	0.00	5606.81	241.15	2450.31	99.28	2549.59	319.26	8699.39
v)	MAHARASHTRA											
1	Gadchirod	13966.06	298.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Gondiya	5273.77	23.83	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	19239.83	322.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	265883.00	139681.52	5607.48	0.00	5607.48	241.29	2450.97	100.12	2551.09	6155.41	14537.86

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
II Basin : Subarnarekha & Bhurhabalang												
i) JHARKHAND												
1	Bokaro	2688.22	17.01	0.00	0.00	0.00	0.17	0.00	0.20	0.20	0.00	0.37
2	Khunti	2603.07	1297.28	1.78	0.00	1.78	4.53	5.02	11.32	16.34	5.79	28.43
3	Pashchini Singhbhum	6941.29	2687.33	2.40	0.00	2.40	4.09	1.54	1.48	3.02	4.56	14.06
4	Purbi Singhbhum	3433.65	3119.28	8.87	0.00	8.87	10.05	0.00	5.07	5.07	12.16	36.15
5	Ramgarh	1259.52	136.64	0.00	0.00	0.00	1.20	0.00	3.13	3.13	0.32	4.64
6	Ranchi	4743.84	2802.26	0.00	0.00	0.00	10.15	15.78	47.98	63.76	21.31	95.22
7	Saraikela Kharsawan	2546.17	2536.09	11.67	0.00	11.67	71.49	0.00	13.42	13.42	27.90	124.48
	Sub Total	24215.76	12595.89	24.72	0.00	24.72	101.66	22.34	82.58	104.93	72.03	303.34
ii) ODISHA												
1	Baleshwar	3733.69	2644.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	443.12	443.12
2	Mayurbhanj	10035.64	7146.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	408.45	408.45
	Sub Total	13769.33	9791.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	851.57	851.57
iii) WEST BENGAL												
1	Pashchim Medinipur	9021.98	2387.68	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Purba Medinipur	3893.57	85.26	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Puruliya	6003.10	931.92	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	18918.65	3404.86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	56903.74	25792.15	24.72	0.00	24.72	101.66	22.34	82.58	104.93	923.61	1154.91
III Basin : Brahmani and Baitarni												
i) JHARKHAND												
1	Gumla	5149.51	4312.74	2.27	0.00	2.27	15.98	0.00	19.92	19.92	24.21	62.39
2	Khunti	2603.07	1305.80	1.79	0.00	1.79	4.55	5.05	11.39	16.44	5.83	28.62
3	Lohardaga	4092.97	11.85	0.01	0.00	0.01	0.06	0.08	0.08	0.16	0.04	0.26
4	Lohardaga	1439.38	911.85	4.70	0.00	4.70	21.87	7.40	27.73	35.13	30.16	91.86
5	Pashchini Singhbhum	6941.29	4253.95	3.79	0.00	3.79	6.47	2.44	2.33	4.77	7.21	22.25
6	Ranchi	4743.84	1150.39	0.00	0.00	0.00	4.17	6.48	19.70	26.18	8.75	39.09
7	Simdega	3639.71	3494.05	4.81	0.00	4.81	2.28	3.48	8.55	12.03	13.16	32.28
	Sub Total	28609.77	15440.63	17.37	0.00	17.37	55.39	24.93	89.71	114.64	89.36	276.76
ii) CHATTISGARH												
1	Jashpur	5583.19	1205.37	9.95	0.00	9.95	0.42	0.32	4.11	4.43	5.38	20.18
2	Surguja	15125.37	158.79	0.53	0.00	0.53	0.04	0.06	0.14	0.21	0.88	1.67
	Sub Total	20708.56	1364.16	10.49	0.00	10.49	0.46	0.38	4.26	4.63	6.26	21.85
iii) ODISHA												
1	Anugul	6129.61	4069.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.25	71.25
2	Baleshwar	3733.69	1081.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	181.14	181.14
3	Bhadrak	2390.28	2390.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	798.13	798.13
4	Cuttack	3802.97	119.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.01	26.01
5	Debagarh	2706.30	2434.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.26	73.26
6	Dhenkanal	4310.65	3650.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.76	84.76
7	Jajapur	2792.19	2750.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	293.47	293.47
8	Kendrapara	2388.95	1096.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	205.82	205.82
9	Kendujhar	7996.91	7996.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	284.20	284.20
10	Mayurbhanj	10035.64	2889.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	165.11	165.11
11	Sambalpur	6479.54	1212.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.77	64.77
12	Sundargarh	9353.52	5412.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.17	66.17
	Sub Total	62120.25	35102.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2314.10	2314.10
	Grand Total	111438.58	51907.47	27.86	0.00	27.86	55.85	25.30	93.97	119.27	2409.73	2612.71

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
IV	Basin : Godavari											
i)	ANDHRA PRADESH											
1	East Godavari	10571.11	5889.31	992.89	0.00	992.89	118.30	351.15	0.60	351.75	96.60	1559.54
2	Visakhapatnam	11115.36	3614.27	149.73	0.00	149.73	85.94	41.20	17.96	59.16	74.06	368.88
3	West Godavari	7582.74	1682.39	373.10	0.00	373.10	29.15	381.19	3.03	384.22	17.39	803.87
	Sub Total	29269.21	11185.97	1515.72	0.00	1515.72	233.39	773.54	21.59	795.13	188.05	2732.29
ii)	TELANGANA											
1	Adilabad	15526.99	15526.99	49.20	0.00	49.20	83.31	507.76	154.47	662.23	19.37	814.11
2	Karimnagar	11539.77	11530.94	8.09	0.00	8.09	184.37	513.15	2447.97	2961.11	0.59	3154.16
3	Khammam	15646.02	9996.76	326.67	0.00	326.67	213.30	310.36	233.17	543.53	51.93	1135.42
4	Medak	9489.96	9128.93	13.19	0.00	13.19	14.25	1283.68	65.39	1349.08	10.66	1387.17
5	Nizamabad	7674.38	7674.38	107.11	0.00	107.11	4.98	1506.74	4.83	1511.57	31.19	1654.85
6	Rangareddy	7358.88	505.32	0.20	0.00	0.20	0.34	40.65	0.75	41.40	1.56	43.49
7	Warangal	12447.42	6248.20	39.24	0.00	39.24	88.43	570.55	677.79	1248.33	9.62	1385.62
	Sub Total	79683.42	60611.52	543.70	0.00	543.70	588.96	4732.88	3584.36	8317.25	124.91	9574.82
iii)	KARNATAKA											
1	Bidar	5293.88	4469.12	0.30	0.00	0.30	0.00	185.06	147.55	332.61	1.49	334.40
2	Gulbarga	10687.27	0.18	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.02
	Sub Total	15981.15	4469.30	0.30	0.00	0.30	0.00	185.07	147.55	332.62	1.50	334.42
iv)	MADHYA PRADESH											
1	Balaghat	8897.36	6686.72	638.12	0.00	638.12	90.57	10.65	275.97	286.62	61.30	1076.61
2	Betul	9690.38	2129.74	86.45	0.00	86.45	14.26	90.78	164.31	255.08	63.59	419.39
3	Chhindwara	11361.38	7972.16	107.39	0.00	107.39	61.59	382.72	912.63	1295.35	117.24	1581.57
4	Mandla	7201.48	709.24	30.39	0.00	30.39	0.43	0.00	10.65	10.65	6.13	47.60
5	Seoni	8422.70	6269.58	644.06	0.00	644.06	95.12	184.85	430.85	615.70	154.39	1509.26
	Sub Total	45573.30	23767.44	1506.41	0.00	1506.41	261.97	669.00	1794.41	2463.40	402.65	4634.43
v)	CHHATISGARH											
1	Bastar	10152.59	9804.73	9.77	0.00	9.77	5.98	19.55	2.25	21.80	24.03	61.58
2	Bijapur	8511.40	8511.40	0.00	0.00	0.00	31.71	0.00	0.71	0.71	1.92	34.34
3	Dantewada	8466.39	8466.39	0.26	0.00	0.26	0.37	1.13	0.05	1.18	1.57	3.38
4	Dhamtari	3915.57	11.93	2.71	0.00	2.71	0.01	0.60	0.01	0.61	0.06	3.39
5	Durg	8287.60	30.84	2.15	0.00	2.15	0.06	1.09	0.02	1.11	0.12	3.44
6	Narayanpur	4131.46	4131.46	2.02	0.00	2.02	0.04	0.99	0.05	1.04	0.42	3.52
7	Rajnandgaon	7764.54	2218.36	127.66	0.00	127.66	4.12	91.24	3.67	94.91	4.72	231.42
8	Kanker	6567.07	4288.17	43.41	0.00	43.41	17.45	135.75	5.22	140.97	0.00	201.83
	Sub Total	57796.62	37463.28	187.99	0.00	187.99	59.74	250.35	11.99	262.33	32.84	542.90
vi)	MAHARASHTRA											
1	Ahmadnagar	16510.41	10368.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Akola	5214.95	0.23	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Amravati	11765.11	4020.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Aurangabad	9772.28	8725.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Bhandara	3719.41	3719.41	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Bid	10244.73	8798.17	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Buldana	9409.67	3796.29	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Chandrapur	10917.27	10917.27	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Gadchiroli	13966.06	13667.51	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Gondiya	5273.77	5249.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Hingoli	4514.84	4514.84	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Jalgaon	11349.74	15.66	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Jalna	7510.09	7386.59	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	Latur	7009.52	7007.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
15	Nagpur	9564.49	9564.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
16	Nanded	10260.74	10260.74	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
17	Nashik	15021.09	6973.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18	Osmanabad	7347.20	2980.50	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
19	Parbhani	6154.98	6154.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
20	Pune	15185.75	81.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
21	Thane	9208.22	3.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
22	Wardha	6084.96	6084.96	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
23	Washim	5017.05	3960.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
24	Yavatmal	13069.20	13069.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	224091.53	147320.64	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
vii)	ODISHA											
1	Kalahandi	7633.06	417.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.65	39.65
2	Koraput	8180.27	6693.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	588.78	588.78
3	Malkangiri	5650.92	5650.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.69	71.69
4	Nabarangapur	5236.39	3581.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.97	39.97
5	Rayagada	7126.04	871.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.03	62.03
	Sub Total	33826.68	17213.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	802.12	802.12
viii)	PUDUCHERRY											
	Yanam	36.94	36.94	2.42	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
	Sub Total	36.94	36.94	2.42	0.00	2.42	0.00	0.00	0.00	0.00	0.00	2.42
	Grand Total	486258.85	302069.06	3756.55	0.00	3756.55	1144.06	6610.84	5559.89	12170.73	1552.06	18623.40

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
V	Basin : Krishna											
i)	ANDHRA PRADESH											
1	Anantapur	18987.72	4185.59	49.05	0.00	49.05	2.10	222.76	1.73	224.49	2.02	277.66
2	Guntur	11186.51	6545.38	1924.87	0.00	1924.87	51.84	444.31	20.79	465.10	113.24	2555.03
3	Krishna	8365.25	4686.80	1148.16	0.00	1148.16	78.59	329.77	30.35	360.12	59.75	1646.62
4	Kurnool	17503.31	9696.79	611.73	0.00	611.73	48.14	509.60	96.13	605.73	96.42	1362.02
5	Prakasam	17389.37	657.16	35.74	0.00	35.74	1.35	43.59	0.44	44.02	3.59	84.70
	Sub Total	73432.16	25771.72	3769.55	0.00	3769.55	182.02	1550.02	149.43	1699.46	275.02	5926.04
ii)	TELANGANA											
1	Hyderabad	173.43	173.43	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Karimnagar	11539.77	8.83	0.01	0.00	0.01	0.14	0.39	1.87	2.27	0.00	2.42
3	Khammam	15646.02	4864.63	158.96	0.00	158.96	103.79	151.03	113.46	264.49	25.27	552.52
4	Mahbubnagar	17974.02	17974.02	295.79	0.00	295.79	37.27	1979.40	44.72	2024.12	129.51	2486.69
5	Medak	9489.96	361.03	0.52	0.00	0.52	0.56	50.77	2.59	53.35	0.42	54.86
6	Nalgonda	13742.14	13742.14	670.59	0.00	670.59	128.05	1423.82	203.00	1626.82	112.56	2538.02
7	Rangareddy	7358.88	6853.56	2.74	0.00	2.74	4.54	551.28	10.17	561.45	21.10	589.84
8	Warangal	12447.42	6199.23	38.93	0.00	38.93	87.73	566.07	672.47	1238.55	9.54	1374.76
	Sub Total	88371.64	50176.87	1167.54	0.00	1167.54	362.10	4722.77	1048.29	5771.06	298.41	7599.10
iii)	KARNATAKA											
1	Bagalkot	6432.04	6432.04	526.85	0.00	526.85	0.00	996.59	64.91	1061.50	1163.85	2752.20
2	Belgaum	13120.75	12113.73		0.00	634.00	2.83	1377.24	1313.56	2690.80	1360.24	4687.87
3	Bellary	8311.09	8311.09	924.16	0.00	924.16	20.28	659.51	32.51	692.02	448.55	2085.01
4	Bidar	5293.88	824.76		0.00	0.05	0.00	34.15	27.23	61.38	0.28	61.71
5	Bijapur	10261.00	10261.00	1181.73	0.00	1181.73	15.06	1052.07	695.65	1747.72	153.60	3098.11
6	Chikmagalur	7167.73	6264.50		0.00	57.71	62.41	227.23	1.56	228.79	122.27	471.18
7	Chitradurga	8360.22	8360.22	7.00	0.00	7.00	0.00	874.17	0.00	874.17	0.00	881.17
8	Dakshina Kannada	4578.68	1.09		0.00	0.00	0.00	0.04	0.10	0.14	0.05	0.19
9	Davanagere	5875.62	5875.62	952.35	0.00	952.35	23.42	857.11	10.80	867.91	123.48	1967.16
10	Dharwad	4202.26	2780.03		0.00	138.24	0.00	146.98	0.00	146.98	0.00	285.22
11	Gadag	4563.79	4563.79	240.52	0.00	240.52	2.60	499.19	3.49	502.68	164.24	910.04
12	Gulbarga	10687.27	10687.08		0.00	381.57	8.06	554.92	149.76	704.68	104.62	1198.93
13	Hassan	6789.18	1384.62	87.66	0.00	87.66	46.26	70.83	1.14	71.98	6.47	212.36
14	Haveri	4743.98	4623.62		0.00	53.18	102.39	600.02	0.21	600.23	203.69	959.49
15	Koppal	5468.71	5468.71	544.59	0.00	544.59	1.64	1033.16	0.00	1033.16	3.43	1582.82
16	Raichur	8276.99	8276.99		0.00	1730.18	2.57	275.04	4.86	279.90	101.16	2113.81
17	Shimoga	8361.30	5694.09	302.03	0.00	302.03	364.81	209.80	42.75	252.54	58.80	978.19
18	Tumkur	10543.89	3897.56		0.00	15.52	36.49	484.47	3.47	487.95	0.00	539.96
19	Udupi	3841.79	3.06	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.05	0.26
20	Uttara Kannada	10048.65	664.06		0.00	0.00	3.87	5.26	6.84	12.10	9.65	25.63
21	Yadgir	5163.02	5163.02	1293.54	0.00	1293.54	35.25	158.02	90.11	248.13	66.10	1643.02
	Sub Total	152091.84	111650.68	6060.43	0.00	9070.88	727.95	10115.81	2449.17	12564.98	4090.53	26454.34
iv)	MAHARASHTRA											
1	Ahmadnagar	16510.41	6130.16	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bid	10244.73	1446.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Kolhapur	7500.31	7237.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Latur	7009.52	2.45	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Osmanabad	7347.20	4366.70	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Pune	15185.75	14790.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Raigarh	6942.67	2.53	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Ratnagiri	8050.94	14.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Sangli	8349.99	8346.19	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Satara	10223.37	10187.31	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Sindhudurg	4966.78	124.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Solapur	14495.87	14495.87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Thane	9208.22	2.55	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	126035.76	67146.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	439931.40	254746.22	10997.52	0.00	14007.97	1272.07	16388.60	3646.89	20035.49	4663.95	39979.47

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Note : (1) Totals may not tally due to rounding off.

Note : (2) : Not available data.

Note : (3) Estimated on the basis of the percentage of the area of each district, within the basin, to the district as a whole.

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
VI Basin : Cauvery												
i) KARNATAKA												
1	Bangalore Urban	2175.82	987.82	0.00	0.00	0.00	0.00	50.60	0.00	50.60	0.00	50.60
2	Bangalore Rural	2294.62	978.92	0.00	0.00	0.00	0.00	95.77	0.00	95.77	0.18	95.95
3	Chamarajanagar	5688.19	5688.19	171.60	0.00	171.60	32.22	316.00	20.40	336.40	0.00	540.22
4	Chikkaballapura	4188.56	6.40	0.00	0.00	0.00	0.00	0.71	0.00	0.71	0.00	0.71
5	Chikmagalur	7167.73	751.01	6.92	0.00	6.92	7.48	27.24	0.19	27.43	14.66	56.49
6	Hassan	6789.18	4941.78	312.88	0.00	312.88	165.09	252.81	4.08	256.89	23.08	757.94
7	Kodagu	4115.60	2898.68	8.63	0.00	8.63	0.35	1.37	0.00	1.37	1.17	11.53
8	Mandya	4942.61	4942.61	891.67	0.00	891.67	155.14	156.95	83.98	240.93	18.10	1305.84
9	Mysore	6319.07	6319.07	897.00	0.00	897.00	164.65	302.37	171.57	473.94	2.15	1537.74
10	Ramanagara	3511.62	3511.62	81.29	0.00	81.29	18.88	268.57	0.00	268.57	4.48	373.22
11	Tumkur	10543.89	3992.00	15.90	0.00	15.90	37.37	496.21	3.56	499.77	0.00	553.04
	Sub Total	57736.89	35018.10	2385.89	0.00	2385.89	581.19	1968.61	283.77	2252.38	63.82	5283.28
ii) KERALA												
1	Idukki	5106.26	385.72	0.99	0.06	1.06	12.42	2.16	5.00	7.15	11.17	31.80
2	Kannur	2957.80	1.16	0.00	0.00	0.00	0.01	0.00	0.03	0.04	0.01	0.06
3	Kozhikode	2347.84	4.42	0.02	0.00	0.02	0.01	0.00	0.05	0.05	0.01	0.09
4	Malappuram	3599.11	1.90	0.01	0.00	0.02	0.02	0.01	0.10	0.10	0.03	0.17
5	Palakkad	4542.91	619.06	57.10	0.36	57.46	6.81	11.70	20.32	32.02	27.62	123.91
6	Wayanad	2141.18	1936.14	0.00	0.00	0.00	0.28	0.00	2.44	2.44	134.76	137.48
	Sub Total	20695.10	2948.40	58.13	0.43	58.56	19.55	13.86	27.93	41.80	173.60	293.51
iii) TAMIL NADU												
1	Ariyalur	1970.10	1623.55	64.51	0.00	64.51	16.51	173.99	34.23	208.22	0.00	289.24
2	Coimbatore	4708.71	2569.37	113.30	0.00	113.30	0.00	167.98	334.80	502.79	4.28	620.36
3	Cuddalore	3725.96	604.91	63.35	0.00	63.35	5.72	148.28	8.79	157.07	1.15	227.30
4	Dharmapuri	4529.54	1906.74	1.24	0.00	1.24	2.91	3.50	198.58	202.08	0.00	206.24
5	Dindigul	6164.99	4429.05	17.44	0.00	17.44	32.21	30.77	617.12	647.89	6.26	703.81
6	Erode	5802.54	5802.54	392.86	0.00	392.86	0.00	271.58	565.70	837.28	4.02	1234.16
7	Karur	2928.71	2928.71	125.92	0.00	125.92	0.10	99.69	270.15	369.84	0.00	495.86
8	Krishnagiri	5142.53	1909.10	3.07	0.00	3.07	27.45	66.77	115.54	182.31	0.00	212.83
9	Nagapattinam	2516.24	2516.20	1197.95	0.00	1197.95	0.00	0.00	0.00	0.00	7.06	1205.01
10	Namakkal	3434.37	3074.96	46.73	0.00	46.73	0.00	92.27	493.07	585.34	5.73	637.80
11	Perambalur	1768.81	625.19	0.00	0.00	0.00	7.57	10.66	74.33	84.98	0.00	92.55
12	Pudukkottai	4740.11	734.16	6.99	0.00	6.99	78.84	46.10	7.82	53.92	0.00	139.74
13	Salem	5247.41	3027.08	1.59	0.00	1.59	0.00	94.08	456.43	550.51	0.00	552.09
14	Thanjavur	3438.78	2221.95	893.99	0.00	893.99	0.28	282.42	1.36	283.78	0.00	1178.06
15	The Nilgiris	2572.79	2213.40	0.00	0.00	0.00	0.00	0.00	4.86	4.86	0.00	4.86
16	Thiruvavur	2302.70	2300.40	1515.98	0.00	1515.98	0.00	0.00	0.00	0.00	0.00	1515.98
17	Tiruchirappalli	4564.08	4032.11	289.12	0.00	289.12	24.33	71.73	287.84	359.56	0.00	673.02
18	Tiruppur	5266.55	4983.33	238.37	0.00	238.37	12.40	145.42	707.12	852.54	0.00	1105.59
	Sub Total	70824.92	47502.75	4972.42	0.00	4734.05	208.32	1705.24	4177.74	5882.98	28.50	11094.50
iv) PONDICHERRY												
1	Karaikal	154.98	154.98	43.05	0.00	43.05	0.00	0.04	0.00	0.04	0.14	43.23
	Sub Total	154.98	154.98	43.05	0.00	43.05	0.00	0.04	0.00	0.04	0.14	43.23
	Grand Total	149411.89	85624.23	7459.49	0.43	7221.55	809.06	3687.75	4489.44	8177.20	266.06	16714.51
VII Basin : Pennar												
i) ANDHRA PRADESH												
1	Anantapur	18987.72	14802.13	173.48	0.00	173.48	7.43	787.78	6.10	793.88	7.15	981.94
2	Chittoor	14957.01	4929.17	7.00	0.00	7.00	41.16	336.76	44.29	381.05	0.25	429.46
3	Kurnool	17503.31	7747.18	488.74	0.00	488.74	38.46	407.14	76.80	483.94	77.03	1088.18
4	Prakasam	17389.37	945.21	51.40	0.00	51.40	1.94	62.69	0.63	63.32	5.17	121.83
5	SPSR Nellore	13090.71	4151.44	307.50	0.00	307.50	153.39	233.66	26.24	259.90	22.63	743.42
6	YSR Kadapa	14969.72	14877.73	217.04	0.00	217.04	3.54	1115.71	12.25	1127.97	23.04	1371.58
	Sub Total	96897.84	47452.86	1245.15	0.00	1245.15	245.93	2943.74	166.32	3110.06	135.27	4736.41
ii) KARNATAKA												
1	Bangalore Rural	2294.62	380.08	0.00	0.00	0.00	0.00	37.18	0.00	37.18	0.07	37.25
2	Chikkaballapura	4188.56	3367.63	0.00	0.00	0.00	0.00	373.96	0.00	373.96	0.00	373.96
3	Kolar	3968.44	388.52	0.00	0.00	0.00	0.00	18.73	0.00	18.73	0.00	18.73
4	Tumkur	10543.89	2654.33	10.57	0.00	10.57	24.85	329.94	2.37	332.30	0.00	367.72
	Sub Total	20995.51	6790.56	10.57	0.00	10.57	24.85	759.81	2.37	762.18	0.07	797.67
	Grand Total	117893.35	54243.42	1255.72	0.00	1255.72	270.78	3703.56	168.68	3872.24	135.34	5534.08

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
VIII Basin : East Flowing Rivers from Mahanadi to Pennar												
i) ANDHRA PRADESH												
1	East Godavari	10571.11	4681.80	789.32	0.00	789.32	94.04	279.16	0.47	279.63	76.79	1239.78
2	Guntur	11186.51	4641.13	1364.86	0.00	1364.86	36.75	315.04	14.74	329.78	80.29	1811.70
3	Krishna	8365.25	3678.45	901.14	0.00	901.14	61.68	258.82	23.82	282.64	46.89	1292.35
4	Kurnool	17503.31	59.34	3.74	0.00	3.74	0.29	3.12	0.59	3.71	0.59	8.33
5	Prakasam	17389.37	15786.99	858.47	0.00	858.47	32.42	1047.07	10.54	1057.61	86.32	2034.83
6	SPSR Nellore	13090.71	2848.33	210.98	0.00	210.98	105.24	160.32	18.00	178.32	15.52	510.07
7	Srikakulam	5730.80	5730.80	1139.41	0.00	1139.41	589.69	42.47	39.08	81.55	59.01	1869.66
8	Visakhapatnam	11115.36	7501.09	310.74	0.00	310.74	178.36	85.50	37.28	122.78	153.70	765.59
9	Vizianagaram	5821.45	5821.45	404.53	0.00	404.53	760.32	268.46	78.06	346.52	39.33	1550.70
10	West Godavari	7582.74	5900.34	1308.51	0.00	1308.51	102.25	1336.88	10.62		61.01	2819.26
	Sub Total	108356.61	56649.72	7291.71	0.00	7291.71	1961.05	3796.84	233.21	2682.54	619.46	13902.26
ii) TELANGANA												
1	Khammam	15646.02	784.64	25.64	0.00	25.64	16.74	24.36	18.30	42.66	4.08	89.12
	Sub Total	15646.02	784.64	25.64	0.00	25.64	16.74	24.36	18.30	42.66	4.08	89.12
iii) ODISHA												
1	Gajapati	3928.20	3928.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	264.92	264.92
2	Ganjam	8197.71	7698.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1854.89	1854.89
3	Kalahandi	7633.06	645.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.28	61.28
4	Kandhamal	7770.03	1962.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.38	7.38
5	Khordha	2654.72	192.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.06	15.06
6	Koraput	8180.27	1486.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	130.80	130.80
7	Nayagarh	3755.00	296.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.34	9.34
8	Rayagada	7126.04	6150.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	437.98	437.98
	Sub Total	49245.03	22360.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2781.67	2781.67
	Grand Total	173247.66	79795.19	7317.35	0.00	7317.35	1977.79	3821.20	251.51	2725.20	3405.20	16773.05
IX Basin : East Flowing Rivers from Pennar to Kanyakumari												
i) ANDHRA PRADESH												
1	Chittoor	14957.01	10027.85	14.24	0.00	14.24	83.75	685.10	90.09	775.20	0.52	873.70
2	SPSR Nellore	13090.71	6090.94	451.17	0.00	451.17	225.05	342.82	38.50	381.32	33.20	1090.74
3	YSR Kadapa	14969.72	92.00	1.34	0.00	1.34	0.02	6.90	0.08	6.98	0.14	8.48
	Sub Total	43017.44	16210.79	466.75	0.00	466.75	308.82	1034.82	128.67	1163.49	33.86	1972.92
ii) KARNATAKA												
1	Bangalore Urban	2175.82	1188	0.00	0.00	0.00	0.00	60.86	0.00	60.86	0.00	60.86
2	Bangalore Rural	2294.62	935.62	0.00	0.00	0.00	0.00	91.53	0.00	91.53	0.18	91.71
3	Chikaballapura	4188.56	814.53	0.00	0.00	0.00	0.00	90.45	0.00	90.45	0.00	90.45
4	Kolar	3968.44	3579.91	0.00	0.00	0.00	0.00	172.62	0.00	172.62	0.00	172.62
	Sub Total	12627.44	6518.06	0.00	0.00	0.00	0.00	415.45	0.00	415.45	0.18	415.63
iii) KERALA												
1	Idukki	5106.26	38.13	0.10	0.01	0.10	1.23	0.21	0.49	0.71	1.10	3.14
2	Kollam	2556.16	11.68	0.04	0.00	0.04	0.00	0.00	0.13	0.13	0.03	0.21
3	Pathanamthitta	2709.55	4.92	0.05	0.00	0.05	0.00	0.00	0.04	0.04	0.00	0.10
4	Thiruvananthapuram	2246.81	4.33	0.07	0.00	0.08	0.01	0.00	0.05	0.05	0.01	0.15
	Sub Total	12618.78	59.06	0.27	0.01	0.28	1.24	0.22	0.72	0.93	1.14	3.59
iv) TAMIL NADU												
1	Ariyalur	1970.10	346.55	13.77	0.00	13.77	3.52	37.14	7.31	44.45	0.00	61.74
2	Chennai	128.00	128.00	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Cuddalore	3725.96	3121.05	326.87	0.00	326.87	29.52	765.05	45.37	810.42	5.94	1172.74
4	Dharmapuri	4529.54	2622.80	1.71	0.00	1.71	4.00	4.82	273.16	277.98	0.00	283.68
5	Dindigul	6164.99	1735.94	6.84	0.00	6.84	12.63	12.06	241.88	253.94	2.45	275.85
6	Kancheepuram	4475.20	4475.19	2.00	0.00	2.00	346.88	79.42	337.83	417.25	0.00	766.13
7	Kanniyakumari	1746.80	70.81	3.52	0.00	3.52	4.55	2.18	1.06	3.24	0.00	11.31
8	Krishnagiri	5142.53	3233.43	5.21	0.00	5.21	46.48	113.08	195.69	308.77	0.00	360.46
9	Madurai	3767.70	3767.63	178.28	0.00	178.28	178.37	6.62	389.48	396.10	0.00	752.75
10	Namakkal	3434.37	359.41	5.46	0.00	5.46	0.00	10.79	57.63	68.42	0.67	74.55
11	Perambalur	1768.81	1143.62	0.00	0.00	0.00	13.84	19.49	135.96	155.46	0.00	169.30
12	Pudukkottai	4740.11	4005.95	38.11	0.00	38.11	430.16	251.56	42.66	294.22	0.00	762.50
13	Ramanathapuram	4040.52	4040.51	0.00	0.00	0.00	523.98	18.86	127.49	146.35	0.00	670.33
14	Salem	5247.41	2220.33	1.16	0.00	1.16	0.00	69.01	334.78	403.79	0.00	404.96
15	Sivaganga	4325.62	4325.62	0.00	0.00	0.00	547.45	39.65	140.96	180.61	0.00	728.06
16	Thanjavur	3438.78	1216.83	489.59	0.00	489.59	0.16	154.67	0.74	155.41	0.00	645.15
17	Theni	2909.55	2907.60	100.05	0.00	100.05	15.78	108.82	374.45	483.27	0.00	599.10
18	Thiruvallur	3377.77	3377.77	1.35	0.00	1.35	177.06	670.18	76.66	746.84	0.00	925.25
19	Thoothukudi	4763.91	4763.91	130.36	1.26	131.62	68.08	3.36	168.41	171.77	1.27	372.74
20	Tiruchirappalli	4564.08	531.97	38.15	0.00	38.15	3.21	9.46	37.98	47.44	0.00	88.79
21	Tirunelveli	6998.99	6982.02	165.05	0.00	165.05	404.48	13.21	580.19	593.40	0.00	1162.92
22	Tiruvannamalai	6187.67	6187.67	0.90	0.00	0.90	15.63	18.15	1249.93	1268.08	0.00	1284.61
23	Vellore	6056.53	6056.53	0.00	0.00	0.00	0.78	111.64	702.86	814.50	0.00	815.28
24	Viluppuram	7211.86	7211.85	11.87	0.00	11.87	341.03	506.80	1578.59	2085.39	0.00	2438.29
25	Virudhunagar	4487.16	4487.15	0.00	0.00	0.00	0.00		285.71		0.00	482.85
	Sub Total	105203.96	79320.14	1520.24	1.26	1521.50	3167.59	3026.01	7386.77	10127.07	10.33	15309.34
v) PONDICHERRY												
1	Pondicherry	301.19	301.19	0.00	0.00	0.00	0.00	88.38	0.00	88.38	0.00	88.38
	Sub Total	301.19	301.19	0.00	0.00	0.00	0.00	88.38	0.00	88.38	0.00	88.38
	Grand Total	173768.81	102409.24	1987.26	1.27	1988.53	3477.65	4564.89	7516.15	11795.33	45.50	17789.86

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
X	Basin : Narmada											
i)	GUJARAT											
1	Bharuch	5083.67	1849.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Dohad	3458.35	60.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Narmada	2719.36	2321.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Panch Mahals	5095.62	137.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Surat	4174.64	168.82	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Vadodara	7234.95	3788.50	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	27766.59	8326.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH											
1	Alirajpur	3217.78	3001.03	22.91	1.89	24.80	47.94	12.54	162.27	174.81	105.61	353.16
2	Anuppur	3637.40	517.37	1.23	0.00	1.23	0.15	2.19	1.73	3.92	4.57	9.76
3	Balaghat	8897.36	2210.54	210.96	0.00	210.96	29.94	3.52	91.23	94.75	20.26	355.91
4	Barwani	5234.28	3841.08	39.81	0.00	39.81	6.69	248.06	408.03	656.09	201.99	904.58
5	Betul	9690.38	3712.61	150.71	0.00	150.71	24.86	158.24	286.42	444.66	110.86	731.08
6	Bhopal	2618.98	3.33	0.06	0.00	0.06	0.04	0.52	0.43	0.95	0.31	1.37
7	Burhanpur	3084.12	368.60	0.00	0.00	0.00	0.58	27.28	40.20	67.48	4.19	72.24
8	Chhindwara	11361.38	3389.22	45.65	0.00	45.65	26.19	162.71	387.99	550.70	49.84	672.38
9	Damoh	7068.37	417.79	13.98	0.00	13.98	5.80	24.04	26.03	50.07	50.19	120.03
10	Dewas	6700.19	3740.87	31.79	0.00	31.79	78.77	853.29	639.68	1492.97	97.14	1700.68
11	Dhar	7842.30	4756.36	189.08	0.00	189.08	156.94	1117.48	630.35	1747.83	299.04	2392.88
12	Dindori	5543.20	4598.04	10.99	0.00	10.99	0.23	0.08	6.45	6.54	11.92	29.68
13	East Nimar (Khandwa)	7169.74	6469.19	266.77	0.00	266.77	60.36	278.54	1016.76	1295.29	251.27	1873.70
14	Harda	3192.55	3127.44	950.94	0.00	950.94	2.11	231.32	328.03	559.35	253.66	1766.06
15	Hoshangabad	6456.42	6456.42	1508.35	0.00	1508.35	41.05	760.29	565.45	1325.74	204.92	3080.06
16	Indore	3765.95	1013.68	6.19	0.00	6.19	8.03	502.07	32.17	534.25	22.62	571.08
17	Jabalpur	4911.29	4619.32	185.96	0.00	185.96	11.16	1071.31	364.30	1435.61	195.29	1828.02
18	Jhabua	3302.18	7.92	0.38	0.00	0.38	0.33	0.06	0.42	0.48	0.45	1.64
19	Katni	4867.17	1093.93	25.71	0.00	25.71	8.32	38.83	96.01	134.83	120.40	289.26
20	Mandla	7201.48	6371.63	272.99	0.00	272.99	3.85	0.00	95.69	95.69	55.07	427.60
21	Narsinghpur	4947.28	4818.19	86.09	0.00	86.09	0.06	1763.92	362.62	2126.55	188.80	2401.50
22	Raisen	8172.10	4494.04	545.81	0.00	545.81	20.06	1104.63	272.97	1377.60	430.61	2374.07
23	Sagar	9858.18	371.79	4.21	0.00	4.21	2.04	28.43	72.30	100.74	31.64	138.63
24	Sehore	6317.41	3143.66	347.27	0.00	347.27	122.36	540.44	392.09	932.54	231.58	1633.76
25	Seoni	8422.70	2153.12	221.19	0.00	221.19	32.66	63.48	147.96	211.44	53.02	518.32
26	Umaria	4411.61	0.47	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.04
27	West Nimar (Khargone)	7757.16	7397.29	447.14	0.00	447.14	0.00	766.72	1365.18	68.51	1880.82	
	Sub Total	165648.96	82094.93	5586.16	1.89	5588.05	690.52	8993.29	7194.32	16786.07	3063.76	26128.41
iii)	CHHATISGARH											
1	Bilaspur	8022.86	0.71	0.05	0.00	0.05	0.00	0.02	0.00	0.02	0.00	0.08
2	Kabeerdham	4061.73	596.41	21.95	0.00	21.95	0.06	69.42	0.38	69.80	3.11	94.92
3	Rajnandgaon	7764.54	78.58	4.52	0.00	4.52	0.15	3.23	0.13	3.36	0.17	8.20
	Sub Total	19849.13	675.70	26.52	0.00	26.52	0.21	72.67	0.51	73.18	3.28	103.19
iv)	MAHARASHTRA											
1	Dhule	6925.51	7.95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Nandurbar	5684.20	1572.12	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	12609.71	1580.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	225874.39	92677.05	5612.68	1.89	5614.57	690.73	9065.97	7194.83	16859.26	3067.05	26231.60
XI	Basin : Tapi											
i)	GUJARAT											
1	Narmada	2719.36	398.16	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bharuch	5083.67	1034.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Surat	4174.64	2654.37	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Tapi	3040.24	1686.10	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	The Dangs	1700.82	25.75	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	16718.73	5798.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii)	MADHYA PRADESH											
1	Harda	3192.55	65.11	19.80	0.00	19.80	0.04	4.82	6.83	11.65	5.28	36.77
2	Burhanpur	3084.12	2715.52	0.00	0.00	0.00	4.27	200.96	296.15	497.11	30.83	532.22
3	Betul	9690.38	3848.03	156.20	0.00	156.20	25.76	164.01	296.87	460.88	114.90	757.75
4	East Nimar (Khandwa)	7169.74	700.55	28.89	0.00	28.89	6.54	30.16	110.10	140.27	27.21	202.90
5	West Nimar (Khargone)	7757.16	359.87	21.75	0.00	21.75	0.00	29.11	37.30	66.41	3.33	91.50
6	Barwani	5234.28	1393.21	14.44	0.00	14.44	2.43	89.98	148.00	237.97	73.26	328.10
	Sub Total	36128.23	9082.29	241.08	0.00	241.08	39.04	519.04	895.25	1414.30	254.82	1949.24
iii)	MAHARASHTRA											
1	Washim	5017.05	1056.31	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Nashik	15021.09	5959.21	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Nandurbar	5684.20	4111.38	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Jalna	7510.09	123.51	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Jalgaon	11349.74	11334.09	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Dhule	6925.51	6864.04	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Buldana	9409.67	5613.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Aurangabad	9772.28	1046.84	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Akola	5214.95	5214.73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Amravati	11765.11	7744.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	87669.69	49067.70	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	140516.65	63948.72	241.08	0.00	241.08	39.04	519.04	895.25	1414.30	254.82	1949.24

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
XII Basin : West Flowing Rivers from Tapi to Tapti												
i) DADRA & NAGAR HAVELI												
1	Dadra & Nagar Haveli	477.07	477.07	12.37	0.00	12.37	0.00	1.12	10.86	11.98	20.33	44.68
	Sub Total	477.07	477.07	12.37	0.00	12.37	0.00	1.12	10.86	11.98	20.33	44.68
ii) DAMAN & DIU												
1	Daman	70.98	70.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	70.98	70.98	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
iii) GOA												
1	North Goa	1650.18	1650.18	56.12	0.00	56.12	124.41	30.76	13.40	44.16	12.10	236.79
2	South Goa	1917.11	1917.11	31.52	0.00	31.52	81.89	17.10	12.30	29.40	8.40	151.21
	Sub Total	3567.29	3567.29	87.64	0.00	87.64	206.30	47.86	25.70	73.56	20.50	388.00
iv) GUJARAT												
1	Navsari	2146.71	2146.71	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Surat	4174.64	1351.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Tapi	3040.24	1354.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	The Dangs	1700.82	1675.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Valsad	2894.91	2894.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	13957.32	9422.26	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
v) KARNATAKA												
1	Belgaum	13120.75	1007.02	52.70	0.00	52.70	0.24	114.49	109.20	223.69	113.08	389.71
2	Dharwad	4202.26	1422.24	70.72	0.00	70.72	0.00	75.19	0.00	75.19	0.00	145.91
3	Haveri	4743.98	120.36	1.38	0.00	1.38	2.67	15.62	0.01	15.63	5.30	24.98
4	Shimoga	8361.30	15.01	0.80	0.00	0.80	0.96	0.55	0.11	0.67	0.16	2.58
5	Uttara Kannada	10048.65	8350.89	0.00	0.00	0.00	48.67	66.19	86.02	152.21	121.38	322.26
	Sub Total	40476.94	10915.52	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
vi) MAHARASHTRA												
1	Ahmadnagar	16510.41	12.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Dhule	6925.51	53.52	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Kolhapur	7500.31	262.87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Mumbai	144.60	144.60	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Mumbai (Suburban)	438.28	438.28	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Nandurbar	5684.20	0.69	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Nashik	15021.09	2088.62	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Pune	15185.75	313.94	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Raigarh	6942.67	6940.14	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Ratnagiri	8050.94	8036.44	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Sangli	8349.99	3.80	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Satara	10223.37	36.06	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Sindhudurg	4966.78	4842.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	Thane	9208.22	9202.56	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	115152.12	32375.79	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grand Total	173701.72	56828.91	100.01	0.00	100.01	206.30	48.98	36.56	85.54	40.83	432.68
XIII Basin : West Flowing Rivers from Tapti to Kanyakumari												
i) KARNATAKA												
1	Chikmagalur	7167.73	152.22	1.40	0.00	1.40	1.52	5.52	0.04	5.56	2.97	11.45
2	Dakshina Kannada	4578.68	4577.59	0.00	0.00	0.00	0.00	163.68	419.86	583.54	221.54	805.08
3	Hassan	6789.18	462.78	29.30	0.00	29.30	15.46	23.67	0.38	24.06	2.16	70.98
4	Kodagu	4115.60	1216.92	3.63	0.00	3.63	0.15	0.58	0.00	0.58	0.49	4.84
5	Shimoga	8361.30	2652.20	140.68	0.00	140.68	169.92	97.72	19.91	117.63	27.39	455.62
6	Udupi	3841.79	3838.73	0.00	0.00	0.00	4.53	5.20	259.24	264.44	59.47	328.44
7	Uttara Kannada	10048.65	1033.70	0.00	0.00	0.00	6.02	8.19	10.65	18.84	15.03	39.89
	Sub Total	44902.93	13934.14	175.01	0.00	175.01	197.60	304.56	710.08	1014.64	329.05	1716.30
ii) KERALA												
1	Alappuzha	1454.48	1454.48	52.84	0.00	52.84	4.62	61.25	9.77	71.02	271.76	400.24
2	Ernakulam	2454.58	2454.57	86.25	0.57	86.82	17.59	5.81	68.07	73.88	53.04	231.33
3	Idukki	5106.26	4682.42	12.08	0.77	12.85	150.77	26.18	60.66	86.84	135.55	386.01
4	Kannur	2957.80	2956.64	5.85	1.55	7.40	16.23	4.43	87.15	91.57	34.18	149.38
5	Kasaragod	1964.67	1964.67	7.15	0.80	7.95	122.71	88.06	317.32	405.38	36.03	572.07
6	Kollam	2556.16	2544.48	9.42	0.00	9.42	0.69	0.47	27.90	28.37	6.23	44.70
7	Kottayam	2258.83	2258.83	0.00	0.00	0.00	1.73	0.39	17.74	18.13	109.70	129.56
8	Kozhikode	2347.84	2343.42	11.03	0.69	11.72	3.82	0.53	25.14	25.67	7.83	49.04
9	Malappuram	3599.11	3597.21	27.25	1.56	28.80	46.59	10.87	180.97	191.85	60.16	327.40
10	Palakkad	4542.91	3923.85	361.92	2.29	364.21	43.20	74.15	128.77	202.92	175.03	785.36
11	Pathanamthitta	2709.55	2704.62	29.64	0.12	29.76	1.04	0.02	22.14	22.16	0.04	52.99
12	Thiruvananthapuram	2246.81	2242.48	38.03	1.77	39.79	4.91	0.89	27.31	28.20	3.84	76.74
13	Thrissur	3071.57	3071.56	156.70	1.94	158.64	36.23	9.60	332.36	341.96	89.50	626.33
14	Wayanad	2141.18	205.04	0.00	0.00	0.00	0.03	0.00	0.26	0.26	14.27	14.56
	Sub Total	39411.75	36404.27	798.14	12.05	810.19	450.15	282.65	1305.56	1588.21	997.16	3845.72
iii) TAMIL NADU												
1	Coimbatore	4708.71	2139.34	94.33	0.00	94.33	0.00	139.87	278.77	418.63	3.57	516.54
2	Kanniyakumari	1746.80	1675.98	83.31	0.00	83.31	107.65	51.69	24.98	76.67	0.00	267.63
3	The Nilgiris	2572.79	359.39	0.00	0.00	0.00	0.00	0.00	0.79	0.79	0.00	0.79
4	Theni	2909.55	1.95	0.07	0.00	0.07	0.01	0.07	0.25	0.32	0.00	0.40
5	Tirunelveli	6998.99	16.96	0.40	0.00	0.40	0.98	0.03	1.41	1.44	0.00	2.82
6	Tiruppur	5266.55	283.22	13.55	0.13	13.68	0.71	8.26	40.19	48.45	0.00	62.83
7	Virudhunagar	4487.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	28690.55	4476.84	191.66	0.13	191.79	109.35	199.92	346.39	546.31	3.57	851.02
iv) PONDICHERRY												
1	Mahe	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27
	Sub Total	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27
	Grand Total	113015.13	54825.15	1164.80	12.18	1176.98	757.10	787.14	2362.03	3149.17	1330.04	6413.30

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 16 : Net Area Irrigated (Source Wise) by River Basin, State & Dist. for the Year Ending 2014-15

(Area in Sq.Km)

Sl. No.	Basin/State/District Name	Total Area	District Area in Basin	Canals		Total Canals	Tanks	Wells		Total Wells	Other Sources	Grand Total
				Government	Private			Tubewells	Other wells			
1	2	3	4	5	6	7	8	9	10	11	12	13
XIV Basin : Mahi												
i) GUJARAT												
1	Anand	2806.43	996.53	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Bharuch	5083.67	2199.42	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Dohad	3458.35	3397.99	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Kheda	3843.53	518.13	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Panch Mahals	5095.62	4889.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Sabar Kantha	7140.29	26.43	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Vadodara	7234.95	3446.45	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	34662.84	15474.34	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii) MADHYA PRADESH												
1	Alirajpur	3217.78	216.75	1.65	0.14	1.79	3.46	0.91	11.72	12.63	7.63	25.51
2	Dhar	7842.30	1505.16	59.83	0.00	59.83	49.66	353.63	199.48	553.10	94.63	757.23
3	Jhabua	3302.18	3294.25	157.47	0.00	157.47	136.95	26.26	172.69	198.95	187.86	681.23
4	Neemuch	4001.43	29.18	0.47	0.00	0.47	0.11	2.12	6.24	8.37	0.38	9.32
5	Ratlam	4639.98	1820.86	23.98	0.00	23.98	17.86	363.80	319.39	683.19	86.08	811.12
	Sub Total	23003.67	6866.20	243.40	0.14	243.54	208.04	746.72	709.52	1456.24	376.58	2284.41
iii) RAJASTHAN												
1	Banswara	4332.72	4332.72	629.63	0.00	629.63	46.82	38.89	157.99	196.88	227.62	1100.95
2	Chittaurgarh	7500.49	133.03	1.87	0.00	1.87	0.51	20.84	19.26	40.10	0.33	42.81
3	Dungarpur	3640.43	3042.56	63.07	0.00	63.07	22.37	50.76	240.88	291.63	18.40	395.48
4	Pratapgarh	4141.45	2993.52	61.61	0.00	61.61	4.03	165.82	578.23	744.05	22.88	832.56
5	Udaipur	11459.12	5494.69	17.14	0.00	17.14	54.08	61.32	340.18	401.50	5.17	477.89
	Sub Total	31074.21	15996.52	773.31	0.00	773.31	127.82	337.64	1336.53	1674.17	274.40	2849.70
	Grant Total	88740.72	38337.06	1016.72	0.14	1016.85	335.86	1084.36	2046.05	3130.41	650.98	5134.11
XV Basin: Sabarmati												
i) GUJARAT												
1	Ahmedabad	7712.66	4718.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Anand	2806.43	1785.66	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Banaskantha	10247.55	506.28	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Bhavnagar	8062.74	213.25	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Gandhinagar	2055.07	2055.07	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Kheda	3843.53	3325.40	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Mahesana	4244.35	2087.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Panchmahal	5095.62	68.67	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Rajkot	10762.12	261.22	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Sabarkantha	7140.29	7113.86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Surendranagar	10116.24	4603.36	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	72086.60	26738.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii) RAJASTHAN												
1	Dungarpur	3640.43	597.87	12.39	0.00	12.39	4.40	9.97	47.33	57.31	3.62	77.71
2	Sirohi	4961.34	54.66	0.08	0.00	0.08	0.06	0.74	7.44	8.18	0.00	8.31
3	Udaipur	11459.12	3289.85	10.26	0.00	10.26	32.38	36.72	203.68	240.39	3.09	286.13
	Sub Total	20060.89	3942.38	22.73	0.00	22.73	36.83	47.43	258.45	305.88	6.71	372.16
	Grant Total	92147.49	30680.58	22.73	0.00	22.73	36.83	47.43	258.45	305.88	6.71	372.16
XVI Basin : WER of Kutch, Saurashtra Including Luni												
i) GUJARAT												
1	Ahmadabad	7712.66	2994.60	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	Anreli	7100.01	7100.01	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	Anand	2806.43	24.24	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	Banas Kantha	10247.55	9741.27	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	Bhavnagar	8062.74	7849.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	Jamnagar	10490.91	10490.91	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	Junagadh	8497.29	8497.29	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	Kachchh	40508.20	40508.20	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	Mahesana	4244.35	2156.99	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Patan	5431.61	5431.61	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	Porbandar	2203.38	2203.38	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	Rajkot	10762.12	10500.90	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	Surendranagar	10116.24	5512.88	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	128183.49	113011.77	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ii) RAJASTHAN												
1	Ajmer	8206.23	1870.76	12.46	0.00	12.46	15.25	10.01	253.36	263.37	40.95	332.02
2	Barmer	27351.28	20773.88	151.19	0.00	151.19	0.00	550.55	1026.22	1576.77	0.01	1727.96
3	Bhilwara	10052.59	2.23	0.04	0.00	0.04	0.02	0.04	0.41	0.45	0.00	0.51
4	Chittaurgarh	7500.49	36.42	0.51	0.00	0.51	0.14	5.71	5.27	10.98	0.09	11.72
5	Jaisalmer	37070.06	2021.38	30.45	0.00	30.45	0.00	39.06	0.47	39.53	0.00	69.98
6	Jalor	10322.33	10322.33	717.57	0.00	717.57	0.31	1487.08	825.71	2312.79	0.00	3030.67
7	Jodhpur	22037.60	13324.02	2.01	0.00	2.01	0.00	2299.56	15.59	2315.15	2.22	2319.38
8	Nagaur	17026.59	6096.23	0.00	0.00	0.00	0.00	694.14	275.94	970.07	0.09	970.16
9	Pali	11890.23	11890.23	1.05	0.00	1.05	104.77	235.78	930.84	1166.62	0.88	1273.32
10	Rajsamand	4485.42	364.89	0.11	0.00	0.11	1.46	0.91	31.33	32.24	0.01	33.82
11	Sikar	7428.38	2.75	0.00	0.00	0.00	0.00	0.82	0.09	0.91	0.00	0.91
12	Sirohi	4961.34	4906.68	6.78	0.00	6.78	5.36	66.24	668.03	734.27	0.00	746.42
13	Udaipur	11459.12	205.67	0.64	0.00	0.64	2.02	2.30			0.19	17.89
	Sub Total	179791.66	71817.47	922.81	0.00	922.81	129.33	5392.19	4033.25	9423.15	44.45	10534.76
iii) Daman & Diu												
1	Diu	34.39	34.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	34.39	34.39	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Grant Total	308009.54	184863.63	922.81	0.00	922.81	129.33	5392.19	4033.25	9423.15	44.45	10534.76

Sources : India-WRIS (col. 2 to 4), Directorate of Economics & Statistics, Ministry of Agriculture (col 5 to 12) (Data received from respective websites)

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
I	Basin : Mahanadi															
i)	JHARKHAND															
1	Simdega	3639.71	145.66	1088.92	4.37	175.12	16.91	1285.32	111.79	1173.54	82.62	32.52	115.14	13.89	1077.03	0.39
ii)	ODISHA															
1	Anugul	6129.61	2060.53	12464.14	1449.52	552.98	1948.05	16414.70	925.45	15489.25	4347.82	1243.24	5591.06	1609.00	9532.43	12.13
2	Balangir	6332.43	6332.43	45972.00	5958.00	3265.00	5599.00	60794.00	3138.00	57656.00	11282.86	2967.51	14250.37	3464.29	42908.85	24.72
3	Bargarh	5583.76	5583.76	38893.00	4556.00	1127.00	4261.00	48837.00	2783.00	46054.00	9706.25	3180.00	12886.25	4097.41	32250.34	27.98
4	Baudh	3006.39	3006.39	14105.00	7742.00	1930.00	6123.00	29900.00	2061.00	27839.00	5237.67	912.21	6149.88	1460.26	21141.07	22.09
5	Cuttack	3802.97	3683.62	37396.35	11939.17	2353.74	21651.49	73340.75	4844.05	68496.69	21236.99	5936.97	27173.96	7887.01	39372.70	38.43
6	Debagarh	2726.66	271.58	1329.78	423.90	0.00	454.78	2208.47	153.79	2054.68	310.34	64.94	375.29	101.59	1642.75	1.82
7	Dhenkanal	4310.65	660.17	5602.48	547.35	431.88	596.67	7178.38	399.41	6778.97	1515.71	431.68	1947.39	544.95	4718.30	4.40
8	Ganjam	8197.71	499.49	3216.64	2017.71	1310.80	953.56	7498.71	519.68	6979.03	1829.64	430.30	2259.94	599.31	4550.08	1.97
9	Jagatsinghapur	1678.55	1678.55	20734.00	9595.00	2328.00	16026.00	48683.00	3654.00	45029.00	21813.11	1898.76	23711.87	2563.18	20652.71	52.66
10	Jajapur	2792.19	41.71	589.64	71.12	110.32	131.25	902.32	51.85	850.47	390.31	35.06	425.37	47.52	412.65	0.75
11	Jharsuguda	2036.85	2036.85	14605.00	1572.00	0.00	1600.00	17777.00	986.00	16791.00	3984.03	1458.93	5442.96	1829.50	10977.47	32.42
12	Kalahandi	7633.06	6570.09	42452.62	13406.91	0.00	12986.86	68846.39	4367.40	64478.99	10371.49	3561.30	13932.79	8300.99	45806.51	18.60
13	Kandhamal	7770.03	5807.13	34873.29	4257.05	12230.05	4192.78	55553.17	3038.08	52515.09	6505.22	1254.74	7759.95	1928.33	44081.54	11.04
14	Kendrapara	2388.95	1292.70	3206.66	2336.54	96.86	3940.41	9580.47	499.99	9080.47	4949.66	337.98	5287.64	449.25	3681.57	31.51
15	Khordha	2654.72	2462.32	25922.48	6785.78	8240.13	6157.84	47106.23	2939.33	44166.90	10467.62	4954.15	15421.78	7714.49	25984.79	32.39
16	Nabarangapur	5236.39	1655.37	14552.96	545.00	1179.16	510.55	16787.67	884.53	15903.14	1721.51	922.51	2644.02	2154.46	12027.17	5.26
17	Nayagarh	3755.00	3458.66	23764.82	5800.05	6214.54	6184.14	41963.54	2649.95	39313.59	8496.15	1875.16	10371.32	2628.72	28188.71	24.30
18	Nuapada	3728.43	3728.43	25491.00	5113.00	0.00	5314.00	35918.00	2232.00	33686.00	6311.11	1488.72	7799.83	3262.00	24112.89	23.15
19	Puri	3433.02	3433.02	35384.00	7829.00	11480.00	8202.00	62895.00	4089.00	58806.00	10249.23	3065.64	13314.87	5170.07	43386.70	22.64
20	Rayagada	7126.04	104.47	629.65	146.71	114.04	137.92	1028.32	65.41	962.90	129.15	29.08	158.23	48.84	784.92	0.24
21	Sambalpur	6479.54	5266.85	28243.05	8737.25	0.00	8932.33	45912.64	3222.11	42690.52	5852.61	1982.99	7835.60	2766.30	34071.61	14.92
22	Subarnapur	2271.97	2271.97	17161.00	2348.00	607.00	2531.00	22647.00	1218.00	21429.00	3442.88	1238.04	4680.92	1842.80	16143.32	21.84
23	Sundergarh	9353.52	3941.17	27564.75	3817.49	0.00	3211.16	34593.40	2011.98	32581.42	5964.09	1881.89	7845.97	2756.63	23860.70	10.15
iii)	MADHYA PRADESH															
1	Anuppur	3637.40	121.78	1124.62	3.19	186.74	7.83	1322.38	66.12	1256.26	37.58	40.48	78.06	90.41	1128.28	0.21
2	Balaghat	8897.36	0.10	0.94	0.04	0.09	0.03	1.10	0.06	1.05	0.12	0.04	0.16	0.05	0.88	0.00
3	Dindori	5543.20	27.29	195.54	0.59	23.05	1.95	221.13	11.05	210.09	6.65	6.88	13.53	8.44	194.99	0.03
4	Mandla	7201.48	2.50	17.20	0.30	2.29	1.32	21.11	1.00	20.12	2.11	0.84	2.95	1.17	16.84	0.01
iv)	CHHATTISGARH															
1	Bastar	10152.59	347.86	1421.18	20.70	190.88	44.76	1677.52	134.03	1543.49	132.77	71.38	204.15	87.09	1323.63	0.45
2	Bilaspur	8022.86	7190.01	33090.87	3244.61	0.00	2815.88	39151.37	2315.76	36835.61	13911.26	2881.41	16792.67	4195.49	18728.86	40.86
3	Dhamtari	3915.57	3903.65	32869.56	7124.74	0.00	9878.88	49873.19	3951.84	45921.35	33283.45	2783.21	36066.66	3121.11	9516.79	78.30
4	Durg	8287.60	8256.76	16795.39	4066.04	2082.22	5197.32	28140.97	1874.95	26266.02	17170.01	4175.18	21345.18	4807.35	4288.66	80.97
5	Jashpur	5583.19	3918.09	17567.86	4756.69	2214.75	3868.20	28407.50	2190.01	26217.50	8421.96	2435.15	10857.10	2960.72	14834.82	29.06
6	Janjgir-Champa	3723.65	3723.65	41275.88	598.02	4966.28	3534.75	50374.93	3155.76	47219.17	14829.85	1954.44	16784.29	2258.36	30130.96	35.55
7	Kabeerddham	4061.73	3465.32	30033.43	1906.79	3363.55	6681.82	41985.59	3514.12	38471.47	19511.76	1608.84	21120.59	1843.92	17115.80	46.84
8	Korba	6333.50	6333.17	41176.19	885.12	4089.76	2961.98	49113.05	2464.31	46648.74	10498.73	3923.41	14422.14	4676.32	31473.69	30.92
9	Koriya	6383.21	2478.01	18111.82	561.27	1318.86	932.09	20924.05	1284.12	19639.93	3832.72	648.19	4480.92	1131.06	14676.15	8.86
10	Mahasamund	4559.96	4559.96	54007.26	3699.24	1096.20	6662.39	65465.09	3722.04	61743.05	29530.10	4241.31	33771.41	4716.97	27495.98	54.70
11	Raigarh	6819.11	6818.53	32327.35	2232.89	3500.94	4993.42	43054.60	2962.36	40092.24	17786.40	3820.04	21606.43	4547.93	17797.75	53.89
12	Raipur	11995.63	11995.63	23706.25	10854.80	876.71	5064.06	40501.82	3256.21	37245.61	14901.51	6067.53	20969.04	6950.76	15393.34	56.30
13	Rajnandgaon	7764.54	5467.60	26681.70	4620.18	3448.88	5059.86	39810.63	3088.64	36721.99	19490.16	2739.20	22229.36	2800.27	14431.56	42.62
14	Surguja	15125.37	2477.40	6743.90	188.46	517.25	422.94	7872.55	576.69	7295.86	1624.27	388.32	2012.59	451.64	5219.95	4.52
15	Kanker	6567.07	2278.90	27042.96	382.76	2931.59	1084.48	31441.79	1751.50	29690.29	7184.18	613.06	7797.24	751.55	21754.56	9.11
v)	MAHARASHTRA															
1	Gadchiroli	13966.06	298.56	1792.31	41.04	0.00	157.75	1991.10	99.55	1891.54	439.38	66.99	506.38	133.86	1318.30	0.57
2	Gondiya	5273.77	23.83	177.68	27.61	14.50	77.21	297.00	16.78	280.22	55.58	26.93	82.52	53.86	170.78	0.13

Sources : India-WRIS (col. 2 to 4), Central Ground Water Board, Faridabad (col 5 to 17)

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

(in Hm. m)																
Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
II	Basin : Subernarekha & Bhurhabalang															
i)	JHARKHAND															
1	Bokaro	2688.22	17.01	145.75	3.01	14.71	5.69	169.16	12.75	156.41	15.06	57.46	72.52	7.31	134.04	0.29
2	Khunti	2603.07	1297.28	6954.22	72.31	1196.46	283.32	8506.31	601.27	7905.04	1395.30	379.46	1774.76	153.99	6355.75	11.19
3	West Singhbhum	6941.29	2687.33	10971.24	13.80	1461.28	47.82	12494.15	1179.75	11314.40	213.13	933.96	1147.09	332.95	10768.32	3.93
4	East Singhbhum	3433.65	3119.28	25893.93	79.88	3574.37	312.50	29860.67	2986.07	26874.60	1537.77	3748.25	5286.02	784.90	24551.94	17.87
5	Ramgarh	1259.52	136.64	1013.55	57.41	123.14	85.03	1279.13	122.48	1156.65	122.24	611.21	733.45	58.91	975.51	6.88
6	Ranchi	4743.84	2802.26	21358.79	233.55	3568.93	780.44	25941.70	2127.47	23814.24	3560.47	2781.89	6342.35	670.46	19583.31	15.73
7	Saraikela Kharsawan	2546.17	2536.09	12356.75	41.69	1114.00	157.02	13669.46	1366.95	12302.51	750.02	1728.70	2478.72	544.83	11007.66	20.07
ii)	ODISHA															
1	Balasore	3733.69	2644.77	55855.75	9407.63	3405.76	13843.34	82512.48	4549.04	77963.44	37228.36	4317.33	41545.69	7134.57	33600.52	37.75
2	Mayurbhanj	10035.64	7146.63	62442.68	22393.48	7185.34	20888.76	112910.27	7377.61	105532.65	29019.79	3956.33	32976.12	6400.97	70111.89	22.25
iii)	WEST BENGAL															
1	Pashchim Medinipore	9021.98	2387.68	63964.06	18218.62	3360.69	10751.29	96294.66	9260.46	87034.20	29355.03	2102.17	31457.20	3416.06	54263.10	9.57
2	Purba Medinipore	3893.57	85.26	1178.11	337.98	42.85	223.80	1782.74	178.27	1604.47	472.17	66.74	538.91	95.07	1037.23	0.74
3	Purulia	6003.10	931.92	8257.28	2185.36	1243.71	746.15	12432.50	1142.83	11289.67	346.62	718.31	1064.93	995.39	9947.66	1.46
III	Basin : Brahmani and Baitarni															
i)	JHARKHAND															
1	Gumla	5149.51	4312.74	35473.31	199.07	6921.13	781.62	43375.13	3704.44	39670.69	3855.45	1240.29	5095.75	509.20	35306.03	10.76
2	Khunti	2603.07	1305.80	6999.89	72.79	1204.31	285.18	8562.18	605.22	7956.96	1404.46	381.95	1786.41	155.01	6397.49	11.26
3	Latehar	4092.97	11.85	57.17	0.43	10.12	1.50	69.21	4.57	64.64	6.94	3.56	10.50	1.27	56.44	0.05
4	Lohardaga	1439.38	911.85	10813.56	41.61	1736.03	160.78	12751.99	1173.42	11578.57	783.64	374.01	1157.66	160.91	10634.02	6.34
5	West Singhbhum	6941.29	4253.95	17367.10	21.84	2313.15	75.71	19777.80	1867.50	17910.30	337.37	1478.43	1815.80	527.05	17045.88	6.21
6	Ranchi	4743.84	1150.39	8768.26	95.88	1465.13	320.39	10649.65	873.37	9776.27	1461.65	1142.03	2603.68	275.24	8039.38	6.46
7	Simdega	3639.71	3494.05	26120.69	104.75	4200.82	405.73	30831.99	2681.50	28150.48	1981.88	780.17	2762.05	333.11	25835.49	9.42
ii)	CHHATISGARH															
1	Jashpur	5583.19	1205.37	8911.16	129.11	1072.18	763.13	10875.58	681.31	10194.27	3201.66	421.95	3623.61	487.56	6505.05	7.67
2	Surguja	15125.37	158.79	432.25	12.08	33.15	27.11	504.59	36.96	467.63	104.11	24.89	129.00	28.95	334.57	0.29
iii)	ODISHA															
1	Anugul	6129.61	4069.08	24613.86	2862.48	1092.02	3846.95	32415.30	1827.55	30587.75	8585.95	2455.13	11041.08	3177.42	18824.38	23.96
2	Baleswar	3733.69	1081.10	22832.10	3845.55	1392.17	5658.73	33728.55	1859.51	31869.04	15217.80	1764.79	16982.59	2916.39	13734.85	15.43
3	Bhadrak	2390.28	2390.28	26200.00	8525.00	1862.00	11629.00	48216.00	2807.00	45409.00	24521.07	2360.73	26881.80	3611.61	17276.32	59.20
4	Cuttack	3802.97	119.34	1211.55	386.80	76.26	701.45	2376.06	156.94	2219.12	688.02	192.34	880.37	255.52	1275.58	1.24
5	Debagarh	2706.30	2434.72	12011.21	3828.91	0.00	4107.80	19947.92	1389.06	18558.86	2803.17	586.59	3389.76	917.60	14838.09	16.43
6	Dhenkanal	4310.65	3650.47	30979.43	3026.64	2388.11	3299.32	39693.51	2208.58	37484.93	8381.26	2387.02	10768.28	3013.38	26090.29	24.33
7	Jajapur	2792.19	2750.48	38882.36	4689.88	7274.68	8654.75	59501.68	3419.15	56082.53	25738.14	2312.08	28050.22	3133.28	27211.10	49.27
8	Kendrapara	2388.95	1096.25	2719.34	1981.46	82.14	3341.59	8124.53	424.01	7700.53	4197.46	286.62	4484.08	380.97	3122.09	26.72
9	Kendujhar	7996.91	7996.91	67852.00	5920.00	4720.00	7605.00	86097.00	4774.00	81323.00	20629.90	4068.99	24698.89	6406.73	54286.37	30.37
10	Mayurbhanj	10035.64	2889.01	25242.32	9052.52	2904.66	8444.24	45643.73	2982.39	42661.35	11731.19	1599.34	13330.53	2587.58	28342.58	9.00
11	Sambalpur	6479.54	1212.69	6502.95	2011.75	0.00	2056.67	10571.36	741.89	9829.48	1347.56	456.58	1804.14	636.94	7844.98	3.44
12	Sundergarh	9353.52	5412.35	37854.25	5242.51	0.00	4409.84	47506.60	2763.02	44743.58	8190.39	2584.36	10774.76	3785.65	32767.54	13.93

Sources : India-WRIS (col. 2 to 4), Central Ground Water Board, Faridabad (col 5 to 17)

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

(in Hm.)																
Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
IV	Basin : Godavari															
i)	ANDHRA PRADESH															
1	East Godavari	10571.11	5889.31	38974.56	20665.57	21331.88	13715.02	94687.04	8917.72	85769.32	18923.48	5055.81	23979.29	8068.12	59418.40	15.58
2	Visakhapatnam	11115.36	3614.27	23927.22	1920.07	4333.73	1713.92	31894.94	2808.08	29086.86	4370.80	1458.34	5829.14	4077.83	20637.90	6.52
3	West Godavari	7582.74	1682.39	13061.54	9512.94	5183.79	10048.54	37806.59	3557.26	34249.34	13264.11	214.55	13478.66	2236.46	19041.63	8.73
ii)	TELANGANA															
1	Adilabad	15526.99	15526.99	134072.00	20183.00	29299.00	22680.00	206234.00	18764.00	187470.00	64218.00	7503.00	71721.00	12632.00	110620.00	38.00
2	Karimnagar	11539.77	11530.94	85243.72	32286.28	18922.51	61372.00	197824.51	18329.96	179495.55	120532.70	16226.57	136759.27	46542.36	12420.49	75.94
3	Khammam	15646.02	9996.76	67171.04	7945.77	19686.17	16401.41	111204.39	9419.15	101785.24	34846.13	3882.80	38728.93	5842.40	61096.70	24.28
4	Medak	9489.96	9128.93	72370.88	14337.00	1264.97	21004.32	108977.18	10116.90	98860.28	68693.32	4748.22	73441.54	9518.56	20648.40	71.18
5	Nizamabad	7674.38	7674.38	65712.00	27968.00	16028.00	34758.00	144466.00	13337.00	131128.00	79763.00	4160.00	83923.00	8278.00	43087.00	64.00
6	Rangareddy	7358.88	505.32	3070.22	383.85	871.47	597.55	4923.09	475.94	4447.15	2375.78	566.37	2942.15	1785.23	286.14	4.53
7	Warangal	12447.42	6248.20	54735.04	11423.27	13093.32	17725.98	96977.61	8426.53	88551.08	50526.54	4136.71	54663.25	7886.91	30137.63	31.12
iii)	KARNATAKA															
1	Bidar	5293.88	4469.12	17751.33	1874.03	3270.61	3367.19	26263.16	1665.32	24597.83	13546.65	1721.01	15267.66	2550.10	8501.09	52.40
2	Gulbarga	10687.27	0.18	0.50	0.09	0.15	0.44	1.17	0.10	1.08	0.29	0.06	0.34	0.13	0.66	0.00
iv)	MADHYA PRADESH															
1	Balaghat	8897.36	6686.72	62541.88	2985.79	6080.60	2052.09	73660.36	3683.27	69977.09	8161.84	2389.08	10550.93	3115.13	58700.11	11.33
2	Betul	9690.38	2129.74	20714.85	804.41	2627.93	2429.80	26576.99	1318.70	25258.28	13845.43	763.74	14609.17	1079.99	10332.86	12.71
3	Chhindwara	11361.38	7972.16	72353.55	3026.02	8353.52	9847.05	93580.14	4679.05	88901.09	46734.85	3841.07	50575.92	5107.60	37058.64	39.92
4	Mandla	7201.48	709.24	4879.19	84.17	650.15	375.80	5989.31	282.38	5706.92	599.84	236.89	836.74	330.87	4776.21	1.44
5	Seoni	8422.70	6269.58	53596.81	1098.34	2686.25	3631.31	61012.72	3050.54	57962.18	15215.14	2389.45	17604.58	6785.20	35961.84	22.61
v)	CHHATTISGARH															
1	Bastar	10152.59	9804.73	40057.16	583.47	5380.22	1261.54	47282.39	3777.77	43504.62	3742.32	2011.84	5754.16	2454.68	37307.62	12.78
2	Bijapur	8511.40	8511.40	74599.28	92.51	10258.92	184.58	85135.29	8513.53	76621.76	808.93	579.74	1388.67	688.18	75124.65	1.81
3	Dantewada	8466.39	8466.39	19630.75	103.90	0.00	580.63	20315.28	1259.64	19055.64	1259.75	640.68	1900.43	765.93	17029.96	9.97
4	Dhamtari	3915.57	11.93	100.45	21.77	0.00	30.19	152.42	12.08	140.34	101.72	8.51	110.22	9.54	29.08	0.24
5	Durg	8287.60	30.84	62.73	15.19	7.78	19.41	105.11	7.00	98.11	64.13	15.59	79.73	17.96	16.02	0.30
6	Narayanpur	4131.46	4131.46	22960.73	218.84	4254.64	375.96	27810.17	1851.88	25958.29	383.20	506.43	889.63	620.94	24954.15	3.43
7	Rajnandgaon	7764.54	2218.36	10825.52	1874.54	1399.31	2052.93	16152.30	1253.15	14899.15	7907.71	1111.37	9019.08	1136.15	5855.29	17.29
8	Kanker	6567.07	4288.17	50886.32	720.22	5516.34	2040.64	59163.52	3295.78	55867.74	13518.36	1153.59	14671.95	1414.17	40935.21	17.15
vi)	MAHARASHTRA															
1	Ahmednagar	16510.41	10368.10	60035.05	9180.70	15958.15	33151.77	118325.67	6236.31	112089.36	83846.60	3035.25	86881.85	5491.85	27383.42	48.67
2	Akola	5214.95	0.23	1.43	0.06	0.08	0.33	1.89	0.11	1.78	0.71	0.06	0.77	0.12	0.95	0.00
3	Amravati	11765.11	4020.91	21010.66	1648.44	2524.46	9541.39	34724.95	1736.25	32988.70	23067.71	981.05	24048.75	1750.18	10331.32	24.91
4	Aurangabad	9772.28	8725.44	62507.54	5008.50	2377.45	29968.64	99862.12	5020.99	94841.14	69070.55	2936.37	72006.92	5738.08	20781.86	67.79
5	Bhandara	3719.41	3719.41	32769.93	5723.24	3904.41	13439.19	55836.77	3038.50	52798.27	19559.67	3185.41	22745.07	6296.92	26941.69	43.08
6	Bid	10244.73	8798.17	72552.26	6400.59	13403.54	25369.43	117725.83	5886.29	111839.54	56211.82	4205.08	60416.90	8410.16	47217.56	46.39
7	Buldana	9409.67	3796.29	27526.03	2095.38	2236.22	8252.60	40110.23	2005.51	38104.72	25932.97	1438.66	27371.64	2760.34	9906.80	28.98
8	Chandrapur	10917.27	10917.27	101730.03	4723.36	0.00	5966.47	112419.86	5620.99	106798.86	10401.36	8332.02	18733.38	16664.04	79733.46	17.54
9	Gadchiroli	13966.06	13667.51	82048.43	1878.71	0.00	7221.53	91148.67	4557.43	86591.23	20114.12	3066.86	23180.98	6127.63	60349.48	26.20
10	Gondiya	5273.77	5249.95	39143.85	6083.14	3194.56	17010.51	65432.07	3696.71	61735.36	12245.70	5933.11	18178.81	11866.22	37623.44	29.32
11	Hingoli	4514.84	4514.84	49296.06	1530.87	7211.48	36626.92	94665.33	4795.61	89869.73	36251.18	2062.52	38313.70	4125.04	49493.51	42.63
12	Jaigaon	11349.74	15.66	128.88	6.64	6.42	60.88	202.82	10.27	192.55	140.75	6.74	147.49	11.96	44.92	0.11
13	Jalna	7510.09	7386.59	59338.91	2705.61	681.34	25144.93	87870.80	4795.71	83075.09	43050.90	1338.37	44389.28	2676.75	37347.44	52.55
14	Latur	7009.52	7007.07	50568.18	3960.02	0.00	17006.89	71535.10	3576.75	67958.34	51094.35	2248.57	53342.92	4084.27	14975.34	78.46
15	Nagpur	9564.49	9564.49	71693.57	4427.49	11334.08	28369.76	115824.90	5791.24	110033.65	55781.95	5929.04	61710.99	11699.78	42551.92	56.08
16	Nanded	10260.74	10260.74	105861.07	882.40	16607.75	17585.22	140936.45	7052.15	133884.30	34725.40	3309.99	38035.40	6618.94	92539.96	28.41
17	Nashik	15021.09	6973.25	68651.98	4887.23	132.49	20283.61	93955.31	5079.74	88875.57	49373.52	1633.41	51006.93	3029.35	38264.20	26.64
18	Osmanabad	7347.20	2980.50	26459.78	2906.29	3254.33	6756.14	39376.53	1968.83	37407.70	22211.16	935.31	23146.46	1804.01	13479.01	25.10
19	Parbhani	6154.98	6154.98	57441.09	888.40	3870.48	24575.71	86775.68	4460.47	82315.21	35413.93	2015.09	37429.02	4009.90	42891.39	45.47
20	Pune	15185.75	81.25	545.23	69.04	19.09	349.30	982.67	51.65	931.02	644.85	42.89	687.74	77.28	236.67	0.40
21	Thane	9208.22	3.10	12.35	0.16	0.00	2.06	14.57	0.74	13.84	2.52	0.51	3.03	1.02	10.30	0.01
22	Wardha	6084.96	6084.96	60983.82	505.64	9366.49	16401.19	87257.13	4432.40	82824.73	37306.69	3755.57	41062.27	7511.15	38006.89	49.58
23	Washim	5017.05	3960.73	35443.32	2231.35	1326.29	8411.70	47412.67	2371.59	45041.08	15926.10	1275.27	17201.37	2550.53	26564.44	30.15
24	Yavatmal	13069.20	13069.20	104323.96	2996.45	19473.47	14027.00	140820.88	7078.37	133742.51	21553.99	5752.54	27306.53	11505.07	100683.44	20.42
vii)	ODISHA															
1	Kalahandi	7633.06	417.57	2698.13	852.09	0.00	825.40	4375.62	277.58	4098.04	659.17	226.34	885.52	527.58	2911.29	1.18
2	Koraput	8180.27	6693.33	46401.74	5786.51	3476.65	4571.44	60236.35	3682.85	56553.50	4350.60	2036.51	6387.11	3214.01	48988.89	9.24
3	Malkangiri	5650.92	5650.92	25865.00	5111.00	1091.00	3824.00	35891.00	2293.00	33598.00	2844.67	1136.04	3980.71	1859.95	28893.38	11.85
4	Nabarangapur	5236.39	3581.02	31482.04	1179.00	2550.84	1104.45	36316.33	1913.47	34402.86	3724.09	1995.65	5719.74	4660.69	26018.08	11.37
5	Rayagada	7126.04	871.13	5250.34	1223.32	950.95	1150.09	8574.70	545.46	8029.24	1076.89	242.51	1319			

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

(in Hm.)																
Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
V	Basin : Krishna															
i)	ANDHRA PRADESH															
1	Anantapur	18987.72	4185.59	15607.36	4302.92	9489.14	6920.17	36319.59	3356.15	32963.44	28577.85	2365.29	30943.14	4118.64	7663.48	20.69
2	Guntur	11186.51	6545.38	21982.17	48705.41	14338.37	10637.57	95665.68	9335.56	86330.12	23932.17	3829.78	27761.95	8592.37	58936.75	18.82
3	Krishna	8365.25	4686.80	26365.75	35657.83	12594.31	9869.72	84487.62	8125.04	76362.58	25363.43	5344.42	30707.85	5344.42	45956.72	22.53
4	Kurnool	17503.31	9696.79	31422.74	16764.52	16156.78	19541.15	83885.19	7951.53	75933.67	33945.64	2043.14	35988.79	7320.52	38079.57	26.26
5	Prakasam	17389.37	657.16	2177.65	773.20	966.67	2589.70	6507.23	611.98	5895.24	1913.26	80.12	1993.37	365.71	3781.43	1.28
ii)	TELANGANA															
1	Rangareddy & Hyderabad	7532.31	7026.99	41711.47	5214.98	11839.60	8118.21	66884.27	6466.02	60418.25	32276.92	7694.67	39971.59	24253.87	3887.45	61.57
2	Karimnagar	11539.77	8.83	65.28	24.72	14.49	47.00	151.49	14.04	137.45	92.30	12.43	104.73	35.64	9.51	0.06
3	Khammam	15646.02	4864.63	32686.81	3866.58	9579.70	7981.27	54114.35	4583.55	49530.80	16956.85	1889.45	18846.30	2843.03	29730.92	11.81
4	Mahbubnagar	17974.02	17974.02	93749.00	31386.00	29192.00	33697.00	188024.00	18730.00	169294.00	75667.00	10747.00	86414.00	14617.00	79010.00	51.00
5	Medak	9489.96	361.03	2862.12	567.00	50.03	830.68	4309.82	400.10	3909.72	2716.68	187.78	2904.46	376.44	816.60	2.82
6	Nalgonda	13742.14	13742.14	100411.00	44061.00	667.00	40360.00	185499.00	17248.00	168251.00	98868.00	10087.00	108955.00	12590.00	56794.00	65.00
7	Warangal	12447.42	6199.23	54306.05	11333.74	12990.70	17587.05	96217.55	8360.49	87857.06	50130.54	4104.29	54234.83	7825.10	29901.42	30.88
iii)	KARNATAKA															
1	Bagalkot	6432.04	6432.04	13179.75	15127.46	5949.99	9992.73	44249.94	3636.19	40613.74	33562.52	3396.88	36959.40	4965.96	7175.47	91.00
2	Belgaum	13120.75	12113.73	29229.93	43765.15	10087.21	21426.22	104508.50	9281.48	95227.02	69615.88	6347.00	75962.88	9739.33	19993.10	73.65
3	Bellary	8311.09	8311.09	21477.63	23265.76	13407.76	15124.68	73275.83	6970.35	66305.48	24850.67	3768.32	28618.98	6410.02	35378.07	43.16
4	Bidar	5293.88	824.76	3275.94	345.85	603.58	621.40	4846.77	307.33	4539.44	2499.99	317.61	2817.59	470.61	1568.84	9.67
5	Bijapur	10261.00	10261.00	27338.70	7978.78	9209.48	7203.08	51730.04	3770.11	47959.94	31246.67	5356.13	36602.81	8335.63	8377.63	76.32
6	Chikmagalur	7167.73	6264.50	30999.51	10965.36	11241.48	5705.31	58911.67	10579.08	48332.59	19625.75	2148.09	21773.84	3049.81	25783.29	39.37
7	Chitradurga	8360.22	8360.22	22359.45	8850.57	15463.17	8256.71	54929.91	4863.00	50066.90	48900.21	3914.62	52814.83	4628.46	2641.06	105.49
8	Dakshin Kannada	4578.68	1.09	9.64	0.41	1.71	0.84	12.59	4.74	7.85	4.71	0.78	5.49	1.00	2.14	0.02
9	Davanagere	5875.62	5875.62	22127.04	10613.55	13696.62	15110.60	61547.81	4831.89	56715.91	47749.81	3818.35	51568.17	5007.28	8552.85	90.92
10	Dharwad	4202.26	2780.03	11304.97	2530.86	4125.21	1709.18	19670.23	3904.05	15766.17	7996.33	1776.07	9772.40	3075.33	4694.52	41.01
11	Gadag	4563.79	4563.79	10616.05	5771.96	6011.61	4618.63	27018.24	2024.57	24993.67	21025.32	2095.42	23120.74	2740.84	3197.51	92.51
12	Gulbarga	10687.27	10687.08	29554.01	5207.54	9048.54	25937.97	69748.06	5853.38	63894.68	17032.34	3443.68	20476.02	7650.09	39212.25	32.05
13	Hassan	6789.18	1384.62	4218.85	5864.59	2665.45	3803.16	16552.05	1711.41	14840.64	7864.12	576.36	8440.49	798.47	6232.50	11.60
14	Haveri	4743.98	4623.62	15990.69	22943.59	9001.15	6586.64	54522.07	3771.06	50751.02	31030.36	2932.55	33962.91	4693.38	15043.57	65.22
15	Koppal	5468.71	5468.71	13636.44	19903.18	7018.00	19672.56	60230.18	5716.92	54513.25	22057.15	2518.21	24575.36	4131.33	28324.77	45.08
16	Raichur	8276.99	8276.99	19191.18	30077.04	9152.18	33338.63	91759.03	8732.24	83026.79	23696.14	2788.01	26484.15	5110.57	54220.08	31.90
17	Shimoga	8361.30	5694.09	26926.06	24429.65	7779.93	13598.42	72734.06	10828.35	61905.72	16205.56	2004.32	18209.87	4002.23	41697.93	20.03
18	Tumkur	10543.89	3897.56	10597.55	8298.08	7434.42	5917.98	32248.03	2082.31	30165.72	27843.23	1598.95	29442.18	2462.04	4219.14	36.08
19	Udupi	3841.79	3.06	37.26	0.78	4.78	1.41	44.22	17.33	26.89	7.84	2.17	10.00	3.09	15.97	0.03
20	Uttar Kannada	10048.65	664.06	4648.41	242.12	370.82	221.80	5483.15	2012.64	3470.50	1137.09	237.05	1374.14	721.67	1611.75	2.62
21	Yadgir	5163.02	5163.02	13013.21	6645.69	5425.01	13201.21	38285.11	3336.40	34948.71	9231.64	1339.39	10571.04	2840.72	22876.35	30.25
iv)	MAHARASHTRA															
1	Ahmednagar	16510.41	6130.16	35495.84	5428.11	9435.29	19601.05	69960.29	3687.23	66273.06	49574.47	1794.60	51369.07	3247.07	16190.50	28.78
2	Bid	10244.73	1446.56	11928.75	1052.36	2203.76	4171.14	19356.01	967.80	18388.21	9242.12	691.38	9933.51	1382.76	7763.32	7.63
3	Kolhapur	7500.31	7237.44	57670.29	8556.42	3538.95	57479.88	127245.54	6726.79	120518.75	46953.50	1385.71	48339.21	2771.42	70793.83	38.70
4	Latur	7009.52	2.45	17.68	1.38	0.00	5.95	25.01	1.25	23.76	17.86	0.79	18.65	1.43	5.24	0.03
5	Osmanabad	7347.20	4366.70	38765.95	4257.97	4767.88	9898.35	57690.15	2884.51	54805.64	32541.34	1370.31	33911.65	2643.04	19747.96	36.78
6	Pune	15185.75	14790.56	99253.19	12568.74	3475.54	63584.96	178882.43	9401.46	169480.98	117386.84	7807.20	125194.04	14068.51	43082.39	71.95
7	Raigarh	6942.67	2.53	13.17	0.13	0.00	1.98	15.28	0.78	14.50	1.53	0.76	2.29	1.53	11.45	0.01
8	Ratnagiri	8050.94	14.49	83.99	0.24	0.00	3.32	87.56	4.38	83.17	7.55	2.25	9.80	4.49	71.13	0.02
9	Sangli	8349.99	8346.19	56667.81	10906.66	2460.89	30571.62	100606.98	5232.30	95374.67	71115.08	2834.63	73949.71	5103.44	20927.43	77.50
10	Satara	10223.37	10187.31	59051.13	8726.98	10507.04	25914.36	104199.52	5298.00	98901.52	71568.63	5055.03	76623.66	9785.82	17697.68	77.20
11	Sindhudurg	4966.78	124.14	629.20	3.57	5.22	48.40	686.39	34.32	652.07	159.01	49.07	208.08	98.14	394.91	0.80
12	Solapur	14495.87	14495.87	99444.95	13137.57	13436.88	40846.07	166865.46	8500.34	158365.12	114689.73	4862.70	119552.43	9039.12	39516.89	75.49
13	Thane	9208.22	2.55	10.16	0.13	0.00	1.70	11.99	0.61	11.38	2.07	0.42	2.49	0.84	8.47	0.01

Sources : India-WRIS (col. 2 to 4), Central Ground Water Board, Faridabad (col 5 to 17)

Note : (1) Totals may not tally due to rounding off.

Note : (2) N.A.: Not available data.

Note : (3) Estimated on the basis of the percentage of the area of each district, within the basin, to the district as a whole.

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VI Basin : Cauvery																
i) KARNATAKA																
1	Bangalore Urban	2175.82	987.82	3104.42	552.85	1645.10	718.72	6021.09	315.41	5705.68	5662.88	2897.00	8559.87	2897.00	0.00	68.11
2	Bangalore Rural	2294.62	978.92	3447.10	1470.65	2132.48	1503.37	8553.61	480.26	8073.35	9736.97	950.31	10687.28	960.01	0.00	56.47
3	Chamarajanagar	5688.19	5688.19	15207.08	11108.16	6062.49	7602.56	39980.29	2812.40	37167.90	26693.83	2402.00	29095.83	2914.82	10857.41	78.28
4	Chikkaballapura	4188.56	6.40	17.54	12.84	12.07	6.94	49.39	4.14	45.25	63.30	2.15	65.44	2.29	0.38	0.22
5	Chikmagalur	7167.73	751.01	3716.33	1314.57	1347.67	683.97	7062.54	1268.26	5794.28	2352.80	257.52	2610.32	365.62	3090.99	4.72
6	Hassan	6789.18	4941.78	15057.29	20931.04	9513.12	13573.66	59075.11	6108.10	52967.01	28067.47	2057.06	30124.53	2849.77	22244.13	41.40
7	Kodagu	4115.60	2898.68	13012.40	1110.61	6448.72	870.34	21442.06	3395.17	18046.89	3915.99	1009.82	4925.81	1330.45	12800.45	19.22
8	Mandya	4942.61	4942.61	12188.96	45548.68	7481.59	38921.39	104140.62	10136.31	94004.31	43280.87	2410.01	45690.88	4316.27	46407.17	48.61
9	Mysore	6319.07	6319.07	18776.93	19257.74	12551.05	12836.53	63422.24	5012.55	58409.70	23536.68	4043.85	27580.53	6250.38	28622.63	47.22
10	Ramanagara	3511.62	3511.62	9392.26	4405.12	7003.89	4044.31	24845.58	1677.73	23167.85	19917.71	6294.18	26211.89	6377.39	463.89	113.14
11	Tumkur	10543.89	3992.00	10854.33	8499.15	7614.56	6061.38	33029.42	2132.76	30896.66	28517.88	1637.70	30155.58	2521.70	4321.38	36.95
ii) KERALA																
1	Idukki	5106.26	385.72	1287.78	14.28	247.46	132.72	1682.25	168.22	1514.02	416.67	350.27	766.94	305.63	791.72	3.83
2	Kannur	2957.80	1.16	17.76	0.00	0.00	2.68	20.44	2.04	18.39	3.14	4.14	7.29	4.31	10.94	0.02
3	Kozhikode	2347.84	4.42	66.63	0.28	0.00	2.42	69.33	6.93	62.40	8.30	25.28	33.58	27.47	26.63	0.10
4	Malappuram	3599.11	1.90	22.23	0.17	3.38	4.51	30.29	3.01	27.29	5.05	10.90	15.95	12.61	9.63	0.03
5	Palakkad	4542.91	619.06	4561.35	121.96	826.88	4147.09	9657.42	965.74	8691.68	2978.58	1829.55	4808.27	1923.03	3801.78	7.54
6	Wayanad	2141.18	1936.14	27627.24	27.13	0.00	573.29	28227.65	2823.04	25405.52	1425.08	3524.73	4949.81	3415.31	20565.12	17.61
iii) TAMIL NADU																
1	Ariyalur	1970.10	1623.55	15246.66	11926.81	2745.62	2359.55	32278.64	3227.86	29050.78	10931.19	1870.30	12801.49	1991.28	16128.31	36.31
2	Coimbatore	4708.71	2569.37	13016.73	5412.14	3322.26	5502.22	27253.35	2725.34	24528.02	20612.52	2799.95	23412.47	3107.95	807.55	52.08
3	Cuddalore	3725.96	604.91	8786.86	12499.52	1183.59	709.13	23179.10	2317.91	20861.19	8404.27	5545.92	13950.19	5609.34	6847.58	10.86
4	Dharmapuri	4529.54	1906.74	7703.79	5996.54	1657.01	1794.15	17151.49	1715.15	15436.34	19053.52	801.11	19854.64	910.54	-4527.73	54.14
5	Dindigul	6164.99	4429.05	20260.70	10573.12	4851.86	10625.79	46311.46	4631.15	41680.31	43178.68	1773.27	44951.95	2139.51	-3637.88	77.48
6	Erode	5802.54	5802.54	18150.67	44594.91	4734.24	6991.57	74471.40	7447.14	67024.26	57638.30	6029.53	63667.83	6446.14	2939.82	94.99
7	Karur	2928.71	2928.71	12827.83	14656.08	4171.08	3152.98	34807.98	3480.80	31327.18	28365.87	1921.71	30287.58	2184.21	777.09	96.68
8	Krishnagiri	5142.53	1909.10	7003.81	4408.37	1875.30	1324.87	14612.36	1461.24	13151.12	14230.02	801.20	15031.21	911.45	-1990.35	42.43
9	Nagapattinam	2516.24	2516.20	7698.94	8453.21	962.83	1267.09	18382.06	1838.21	16543.86	15718.05	1005.89	16723.94	1139.68	-313.87	101.09
10	Namakkal	3434.37	3074.96	13491.72	14815.94	3311.28	4603.93	36222.88	3622.29	32600.59	39281.31	1964.92	41246.23	2144.30	-8825.02	113.28
11	Perambalur	1768.81	625.19	3494.41	3330.34	707.75	915.11	8447.61	844.76	7602.85	8865.23	410.95	9276.19	444.23	-1706.61	43.12
12	Pudukkottai	4740.11	734.16	5057.84	8334.73	1330.71	2243.54	16966.82	1696.68	15270.14	5590.03	338.30	5928.34	381.83	9298.28	6.01
13	Salem	5247.41	3027.08	14320.12	11478.27	2995.05	6209.42	35002.87	3500.29	31502.58	33871.02	2875.44	36746.46	3059.41	-5427.85	67.29
14	Thanjavur	3438.78	2221.95	22303.82	22426.02	3748.68	5117.09	53595.62	5359.56	48236.05	47461.05	1626.97	49088.02	1866.69	-1091.69	65.76
15	The Nilgiris	2572.79	2213.40	9884.28	177.67	2339.05	85.95	12486.95	1248.70	11238.26	517.91	458.87	976.78	515.74	10204.61	7.48
16	Thiruvavur	2302.70	2300.40	14221.93	12652.63	1987.21	4507.27	33369.05	3336.90	30032.14	22417.84	1342.02	23759.85	1525.34	6088.97	79.04
17	Tiruchirappalli	4564.08	4032.11	20246.88	39260.79	3960.23	5312.25	68780.15	6878.01	61902.13	43744.39	6338.98	50083.37	6582.79	11574.95	71.48
18	Tiruppur	5266.55	4983.33	19589.04	13348.72	4839.71	9928.53	47706.00	4770.60	42935.40	45058.41	3141.08	48199.49	3400.36	-5523.37	106.22
iv) PUDUCHERRY																
1	Karaikal	154.98	154.98	1995.10	4036.09	281.55	532.32	6845.06	684.51	6160.55	510.83	387.67	898.50	353.54	5296.18	15.00
VII Basin : Pennar																
i) ANDHRA PRADESH																
1	Anantapur	18987.72	14802.13	55194.64	15217.08	33557.86	24472.83	128442.41	11868.85	116573.56	101064.15	8364.71	109428.86	14565.36	27101.52	73.18
2	Chittoor	14957.01	4929.17	44208.93	5179.96	3026.97	7746.21	60162.07	5824.24	54337.83	33136.51	5650.89	38787.40	6201.25	15601.50	23.52
3	Kurnool	17503.31	7747.18	25104.97	13393.89	12908.34	15612.26	67019.47	6352.81	60666.65	27120.63	1632.35	28752.98	5848.68	30423.40	20.98
4	Prakasam	17389.37	945.21	3132.17	1112.11	1390.39	3724.83	9359.51	880.23	8479.28	2751.89	115.23	2867.12	526.00	5438.93	1.84
5	SPSR Nellore	13090.71	4151.44	50800.53	11515.89	244.82	26997.80	89559.05	8142.91	81416.14	23616.58	1840.62	25457.19	3023.82	54776.06	9.92
6	YSR Cudappah	14969.72	14877.73	47012.32	9585.73	37862.89	14629.54	109090.49	10442.43	98648.05	63593.80	5744.48	69338.28	9397.89	26849.98	69.86
ii) KARNATAKA																
1	Bangalore Rural	2294.62	380.08	1338.39	571.00	827.97	583.71	3321.06	186.47	3134.60	3780.52	368.97	4149.49	372.74	0.00	21.93
2	Chikkaballapura	4188.56	3367.63	9228.46	6756.52	6352.44	3649.78	25987.20	2177.50	23809.71	33305.72	1128.80	34434.51	1206.63	200.98	116.28
3	Kolar	3968.44	388.52	1304.66	621.96	735.75	722.48	3384.85	178.91	3205.94	5768.56	336.54	6105.10	336.54	0.00	18.64
4	Tumkur	10543.89	2654.33	7217.18	5651.19	5063.01	4030.29	21961.67	1418.10	20543.57	18961.89	1088.93	20050.82	1676.71	2873.34	24.57

Sources : India-WRIS (col. 2 to 4), Central Ground Water Board, Faridabad (col 5 to 17)

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

(in Rupees Crores)																
Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VIII	Basin : East Flowing Rivers from Mahanadi to Pennar															
i)	ANDHRA PRADESH															
1	East Godavari	10571.11	4681.80	30983.44	16428.43	16958.12	10902.98	75272.96	7089.28	68183.68	15043.52	4019.19	19062.71	6413.88	47235.60	12.38
2	Guntur	11186.51	4641.13	15586.89	34535.53	10166.90	7542.78	67833.63	6619.56	61214.06	16969.58	2715.58	19685.16	6092.59	41790.25	13.34
3	Krishna	8365.25	3678.45	20693.25	27986.17	9884.69	7746.28	66310.38	6376.96	59933.42	19906.57	4194.58	24101.15	4194.58	36069.28	17.68
4	Kurnool	17503.31	59.34	192.29	102.59	98.87	119.58	513.34	48.66	464.68	207.73	12.50	220.24	44.80	233.03	0.16
5	Prakasam	17389.37	15786.99	52313.81	18574.60	23222.41	62212.39	156323.42	14701.67	141621.75	45962.28	1924.65	47886.93	8785.38	90841.58	30.70
6	SPSR Nellore	13090.71	2848.33	34854.58	7901.13	167.97	18523.37	61447.05	5586.91	55860.14	16203.49	1262.86	17466.34	2074.66	37582.21	6.80
7	Srikakulam	5730.80	5730.80	40417.00	38297.00	24646.00	19754.00	123115.00	11733.00	111382.00	38291.00	4504.00	42795.00	17584.00	62902.00	38.42
8	Visakhapatnam	11115.36	7501.09	49658.78	3984.93	8994.27	3557.08	66195.06	5827.92	60367.14	9071.20	3026.66	12097.86	8463.17	42832.10	13.52
9	Vizianagaram	5821.45	5821.45	42539.00	22254.00	28250.00	7492.00	100534.00	8936.00	91598.00	16894.00	918.00	17812.00	6116.00	68723.00	19.45
10	West Godavari	7582.74	5900.34	45808.38	33363.00	18180.18	35241.40	132592.18	12475.72	120116.46	46518.81	752.45	47271.26	7843.53	66781.25	30.62
ii)	TELANGANA															
1	Khammam	15646.02	784.64	5272.22	623.66	1545.16	1287.34	8728.37	739.30	7989.07	2735.05	304.76	3039.81	458.57	4795.45	1.91
iii)	ODISHA															
1	Gajapati	3928.20	3928.20	10985.00	3549.00	5802.00	3673.00	24009.00	1339.00	22670.00	5768.83	1060.98	6829.81	1302.46	15598.71	30.13
2	Ganjam	8197.71	7698.21	49575.30	31097.25	20202.18	14696.42	115571.14	8009.31	107561.83	28198.67	6631.81	34830.49	9236.70	70126.46	30.41
3	Kalahandi	7633.06	645.40	4170.25	1317.00	0.00	1275.74	6762.99	429.02	6333.97	1018.82	349.84	1368.66	815.43	4499.71	1.83
4	Kandhamal	7770.03	1962.90	11787.71	1438.95	4133.95	1417.22	18777.83	1026.92	17750.91	2198.86	424.12	2622.99	651.81	14900.24	3.73
5	Khordha	2654.72	192.40	2025.52	530.22	643.87	481.16	3680.77	229.67	3451.10	817.92	387.11	1205.02	602.79	2030.39	2.53
6	Koraput	8180.27	1486.94	10308.26	1285.49	772.35	1015.56	13381.65	818.15	12563.50	966.50	452.41	1418.91	714.00	10883.00	2.05
7	Nayagarh	3755.00	296.34	2036.18	496.95	532.46	529.86	3595.46	227.05	3368.41	727.96	160.67	888.62	225.23	2415.23	2.08
8	Rayagada	7126.04	6150.44	37069.01	8636.98	6714.01	8119.99	60539.98	3851.12	56688.86	7603.14	1712.21	9315.35	2875.48	46210.23	14.18
IX	Basin : East Flowing Rivers from Pennar to Kanyakumari															
i)	ANDHRA PRADESH															
1	Chittoor	14957.01	10027.85	89938.16	10538.05	6158.04	15758.81	122393.06	11848.77	110544.28	67412.56	11496.12	78908.67	12615.76	31739.53	47.86
2	SPSR Nellore	13090.71	6090.94	74533.89	16895.97	359.20	39610.83	131399.90	11947.18	119452.72	34649.94	2700.53	37350.47	4436.51	80366.73	14.55
3	YSR Cudappah	14969.72	92.00	290.71	59.28	234.13	90.47	674.59	64.57	610.01	393.25	35.52	428.77	58.11	166.03	0.43
ii)	KARNATAKA															
1	Bangalore Urban	2175.82	1188.00	3733.52	664.89	1978.47	864.37	7241.25	379.33	6861.92	6810.45	3484.07	10294.52	3484.07	0.00	81.91
2	Bangalore Rural	2294.62	935.62	3294.63	1405.60	2038.16	1436.87	8175.26	459.02	7716.25	9306.28	908.28	10214.56	917.55	0.00	53.98
3	Chikkaballapura	4188.56	814.53	2232.09	1634.20	1536.47	882.77	6285.53	526.67	5758.86	8055.67	273.02	8328.69	291.85	48.61	28.12
4	Kolar	3968.44	3579.91	12021.47	5730.88	6779.35	6657.08	31188.78	1648.53	29540.24	53152.77	3100.98	56253.75	3100.98	0.00	171.79
iii)	KERALA															
1	Idukki	5106.26	38.13	127.30	1.41	24.46	13.12	166.30	16.63	149.67	41.19	34.63	75.82	30.21	78.26	0.38
2	Kollam	2556.16	11.68	125.10	0.63	40.89	17.73	184.36	17.78	166.58	22.82	51.55	74.38	58.91	84.84	0.20
3	Pathanamthitta	2709.55	4.92	36.68	0.22	11.52	6.37	54.79	5.27	49.52	6.62	10.25	16.87	9.87	33.03	0.06
4	Thiruvananthapuram	2246.81	4.33	43.36	0.46	12.73	5.88	62.42	5.33	57.09	10.20	24.21	34.41	24.84	22.06	0.12
iv)	TAMIL NADU															
1	Ariyalur	1970.10	346.55	3254.43	2545.80	586.06	503.65	6889.94	688.99	6200.95	2333.28	399.22	2732.50	425.04	3442.62	7.75
2	Chennai	128.00	128.00	1507.57	0.00	155.66	0.00	1663.23	166.32	1496.90	0.00	2768.26	2768.26	4783.40	-3286.49	184.93
3	Cuddalore	3725.96	3121.05	45336.03	64491.64	6106.74	3658.78	119593.20	11959.32	107633.88	43362.04	28614.33	71976.38	28941.54	35330.29	56.01
4	Dharmapuri	4529.54	2622.80	10596.88	8248.48	2279.28	2467.93	23592.58	2359.26	21233.32	26208.91	1101.96	27310.88	1252.49	-6228.08	74.48
5	Dindigul	6164.99	1735.94	7941.06	4144.07	1901.66	4164.71	18151.50	1815.15	16336.35	16923.63	695.02	17618.65	838.57	-1425.84	30.37
6	Kancheepuram	4475.20	4475.19	39764.16	60450.31	3891.36	13057.93	117163.76	11716.38	105447.38	63405.86	5062.75	68468.61	7056.17	34985.35	64.93
7	Kanniyakumari	1746.80	70.81	262.76	564.00	129.16	123.20	1079.12	107.91	971.21	129.43	42.97	172.40	60.75	781.02	0.72
8	Krishnagiri	5142.53	3233.43	11862.31	7466.42	3176.18	2243.93	24748.85	2474.88	22273.96	24101.28	1356.98	25458.26	1543.72	-3371.04	71.87
9	Madurai	3767.70	3767.63	18999.73	38422.74	4474.66	8988.18	70885.31	7088.53	63796.78	39039.59	4010.31	43049.89	4777.24	19979.95	67.48
10	Namakkal	3434.37	359.41	1576.95	1731.73	387.03	538.12	4233.83	423.38	3810.45	4591.31	229.67	4820.98	250.63	-1031.49	13.24
11	Perambalur	1768.81	1143.62	6392.10	6091.97	1294.65	1673.95	15452.66	1545.27	13907.40	16216.60	751.73	16968.34	812.59	-3121.80	78.88
12	Pudukkottai	4740.11	4005.95	27598.13	45478.51	7261.06	12241.92	92579.61	9257.96	83321.65	30502.07	1845.95	32348.02	2083.47	50736.12	32.81
13	Ramanathapuram	4040.52	4040.51	13902.79	31102.92	4557.25	8173.02	57735.99	5773.60	51962.39	5931.02	1403.53	7334.55	1671.88	44359.48	14.12
14	Salem	5247.41	2220.33	10503.65	8419.19	2196.84	4554.54	25674.22	2567.42	23106.80	24844.02	2109.10	26953.12	2244.04	-3981.27	49.36
15	Sivaganga	4325.62	4325.62	19777.74	58564.75	4809.26	17535.62	100687.37	10068.74	90618.63	17771.25	1401.34	19172.59	1684.34	71163.05	21.16
16	Thanjavur	3438.78	1216.83	12214.48	12281.40	2052.93	2802.33	29351.13	2935.11	26416.02	25991.60	890.99	26882.59	1022.27	-597.85	36.01
17	Theni	2909.55	2907.60	12069.92	14603.30	8337.10	7944.50	42954.83	4295.48	38659.34	29321.44	753.71	30075.15	897.85	8440.06	77.74
18	Thiruvallur	3377.77	3377.77	25814.59	48563.48	2001.54	1911.55	78291.16	7829.12	70462.05	29548.04	18598.82	48146.86	19141.09	21772.92	68.33
19	Thoothukkudi	4763.91	4763.91	17749.74	25783.35	5770.64	7011.77	56315.50	5631.55	50683.95	20056.05	1591.15	21647.20	1895.44	28732.46	42.71
20	Tiruchirappalli	4564.08	531.97	2671.24	5179.81	522.49	700.86	9074.40	907.44	8166.96	5771.35	836.32	6607.67	868.49	1527.12	9.43
21	Tirunelveli	6998.99	6982.02	27506.79	56727.54	9144.77	7309.33	100688.43	10068.84	90619.58	56842.11	2006.40	58848.51	2385.06	31392.42	64.78
22	Tiruvannamalai	6187.67	6187.67	40412.49	73856.89	5223.55	4604.26	124097.19	12409.72	111687.47	99684.23	3278.01	102962.24	3275.78	8277.45	92.19
23	Vellore	6056.53	6056.53	27371.76	28411.08	5009.04	4731.20	65523.07	6552.31	58970.76	54257.79	6548.26	60806.05	7353.64	-2640.67	103.11
24	Viluppuram	7211.86	7211.85	52900.52	97858.22	6552.42	7989.71	165300.88	16530.09	148770.79	141402.66	5010.48	146413.13	5688.52	1679.61	98.42
25	Virudhunagar	4487.16	4487.15	20769.66	22583.32	7014.79	8903.62	592								

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
X	Basin : Narmada															
i)	GUJARAT															
1	Bharuch	5083.67	1849.91	12445.83	946.92	0.00	3592.59	16985.34	849.27	16136.07	6681.69	834.04	7515.73	1083.67	8370.71	16.95
2	Dohad	3458.35	60.36	391.85	118.77	0.00	166.61	677.23	33.86	643.37	232.84	79.78	312.62	96.81	313.72	0.85
3	Narmada	2719.36	2321.20	15507.07	1422.82	0.00	3801.85	20731.74	1036.59	19695.15	3766.52	1366.59	5133.11	1779.72	14148.91	22.25
4	Panchmahals	5095.62	137.56	942.37	494.40	0.00	891.20	2327.97	116.40	2211.57	665.42	155.90	821.32	189.16	1356.99	1.00
5	Surat	4174.64	168.82	2558.28	2273.36	0.00	1895.37	6727.01	336.35	6390.66	1848.99	255.46	2104.45	335.08	4206.59	1.33
6	Vadodara	7234.95	3788.50	49085.73	6218.53	0.00	11746.79	67051.05	3352.55	63698.50	33824.76	4384.11	38208.87	5532.77	24340.98	31.41
ii)	MADHYA PRADESH															
1	Alirajpur	3217.78	3001.03	17899.06	767.66	0.00	1351.15	20017.87	1000.89	19016.98	4430.30	2064.60	6494.90	5431.69	9154.98	31.85
2	Anuppur	3637.40	517.37	4777.83	13.56	793.35	33.26	5618.00	280.90	5337.10	159.64	171.99	331.62	384.09	4793.37	0.88
3	Balaghat	8897.36	2210.54	20675.51	987.06	2010.17	678.39	24351.13	1217.64	23133.49	2698.20	789.80	3488.00	1029.82	19405.47	3.75
4	Barwani	5234.28	3841.08	27094.69	1180.12	0.00	4238.35	32513.16	1625.66	30887.51	22833.21	2379.54	25212.76	3459.72	4594.57	59.90
5	Betul	9690.38	3712.61	36110.59	1402.26	4581.06	4235.69	46329.59	2298.79	44030.80	24135.65	1331.37	25467.02	1882.67	18012.48	22.16
6	Bhopal	2618.98	3.33	40.72	2.43	0.00	7.16	50.31	2.52	47.80	31.65	3.66	35.30	4.47	11.68	0.09
7	Burhanpur	3084.12	368.60	3450.00	109.23	0.00	510.99	4070.23	203.51	3866.72	2923.42	144.90	3068.32	186.68	756.61	9.48
8	Chhindwara	11361.38	3389.22	30759.81	1286.46	3551.35	4186.29	39783.91	1989.22	37794.69	19868.48	1632.96	21501.44	2171.40	15754.81	16.97
9	Damoh	7068.37	417.79	1816.22	93.33	0.00	529.63	2439.17	121.96	2317.21	1346.07	136.03	1482.10	192.36	778.78	3.78
10	Dewas	6700.19	3740.87	40020.07	1684.06	1490.76	6367.23	49562.12	2478.09	47084.04	37897.65	2270.41	40168.06	2766.51	6419.88	47.63
11	Dhar	7842.30	4756.36	51255.79	2829.26	0.00	12359.12	66444.18	3324.55	63119.63	48108.91	3236.97	51345.88	6448.57	8562.15	49.34
12	Dindori	5543.20	4598.04	32945.85	98.85	3884.22	329.28	37258.21	1861.27	35396.94	1120.05	1159.02	2279.07	1422.58	32854.30	5.34
13	East Nimar (Khandwa)	7169.74	6469.19	63407.40	1815.65	0.00	9425.76	74648.81	3732.61	70916.20	43932.93	2647.83	46580.76	4489.80	22493.47	59.26
14	Harda	3192.55	3127.44	37564.19	2545.49	0.00	15240.75	55350.43	2758.40	52592.03	13867.14	989.53	14856.67	1301.90	37422.99	27.67
15	Hoshangabad	6456.42	6456.42	148471.94	10274.43	0.00	60539.74	219286.11	10963.87	208322.24	39242.87	3067.70	42310.57	4349.00	164730.37	20.31
16	Indore	3765.95	1013.68	11994.95	1108.08	0.00	3535.39	16638.42	831.94	15806.48	17540.32	1001.59	18541.90	1211.74	-2945.58	31.58
17	Jabalpur	4911.29	4619.32	49938.99	2509.89	922.14	6233.13	59604.15	2980.95	56623.20	24444.78	3292.71	27737.49	4888.99	27289.44	46.08
18	Jhabua	3302.18	7.92	52.39	1.89	0.00	5.24	59.52	2.97	56.54	21.59	6.10	27.68	13.65	21.31	0.12
19	Katni	4867.17	1093.93	7928.22	414.00	0.00	1079.32	9421.54	471.00	8950.54	3058.93	593.51	3652.44	1017.70	4873.91	9.17
20	Mandla	7201.48	6371.63	43833.36	756.19	5840.76	3376.07	53806.38	2536.85	51269.53	5388.84	2128.17	7517.01	2972.47	42908.22	12.97
21	Narsinghpur	4947.28	4818.19	107446.21	3577.72	0.00	17438.67	128462.59	6423.16	122039.43	79302.49	2164.14	81466.63	2986.08	39750.87	65.01
22	Raisen	8172.10	4494.04	45232.49	1728.52	0.00	4948.94	51909.95	2560.85	49349.10	20648.71	1820.44	22469.15	2426.27	26274.12	25.04
23	Sagar	9858.18	371.79	4089.07	137.30	0.00	588.63	4814.99	240.75	4574.24	2662.51	113.66	2776.16	311.33	1600.41	2.29
24	Sehore	6317.41	3143.66	33770.22	1950.11	0.00	7361.02	43081.35	2154.07	40927.28	25378.33	1181.92	26560.25	2879.72	12669.23	32.30
25	Seoni	8422.70	2153.12	18406.40	377.20	922.52	1247.08	20953.19	1047.63	19905.56	5225.23	820.59	6045.83	2330.19	12350.14	7.76
26	Umariya	4411.61	0.47	4.42	0.04	0.63	0.10	5.18	0.26	4.92	0.41	0.15	0.56	0.43	4.08	0.00
27	West Nimar (Khargone)	7757.16	7397.29	56617.95	3036.30	0.00	12178.93	71833.18	3541.37	68291.81	46561.33	3527.08	50088.41	5648.64	16081.84	69.94
iii)	CHHATTISGARH															
1	Bilaspur	8022.86	0.71	3.27	0.32	0.00	0.28	3.87	0.23	3.64	1.37	0.28	1.66	0.41	1.85	0.00
2	Kaberdham	4061.73	596.41	5169.00	328.17	578.90	1150.00	7226.07	604.81	6621.26	3358.13	276.89	3635.03	317.35	2945.77	8.06
3	Rajnandgaon	7764.54	78.58	383.47	66.40	49.57	72.72	572.16	44.39	527.77	280.11	39.37	319.48	40.25	207.41	0.61
iv)	MAHARASHTRA															
1	Dhule	6925.51	7.95	56.82	6.45	0.00	22.37	85.64	4.73	80.92	40.14	2.05	42.19	4.04	36.73	0.06
2	Nandurbar	5684.20	1572.12	11780.34	618.18	0.00	2333.54	14732.06	826.64	13905.42	6196.88	853.51	7050.39	1707.02	6001.52	14.02
XI	Basin : Tapi															
i)	GUJARAT															
1	Narmada	2719.36	398.16	2659.96	244.06	0.00	652.14	3556.16	177.81	3378.35	646.08	234.41	880.49	305.28	2426.99	3.82
2	Bharuch	5083.67	1034.35	6958.90	529.46	0.00	2008.74	9497.10	474.86	9022.25	3735.97	466.34	4202.31	605.92	4680.36	9.48
3	Surat	4174.64	2654.37	40224.05	35744.17	0.00	29801.08	105769.30	5288.47	100480.84	29071.83	4016.55	33088.38	5268.50	66140.50	20.94
4	Tapi	3040.24	1686.10	13641.89	5889.82	0.00	7283.89	26815.61	2056.60	24759.00	10757.19	737.61	11494.80	994.39	10398.94	25.75
5	The Dangs	1700.82	25.75	70.01	31.02	0.00	0.52	101.55	5.08	96.47	21.82	8.81	30.64	11.48	63.17	0.48
ii)	MADHYA PRADESH															
1	Harda	3192.55	65.11	782.05	52.99	0.00	317.30	1152.34	57.43	1094.91	288.70	20.60	309.30	27.10	779.11	0.58
2	Burhanpur	3084.12	2715.52	25416.60	804.73	0.00	3764.56	29985.88	1499.30	28486.58	21537.20	1067.49	22604.69	1375.32	5574.07	69.87
3	Betul	9690.38	3848.03	37427.74	1453.41	4748.16	4390.19	48019.49	2382.64	45636.85	25016.02	1379.93	26395.95	1951.34	18669.50	22.97
4	East Nimar (Khandwa)	7169.74	700.55	6866.40	196.62	0.00	1020.72	8083.74	404.21	7679.53	4757.51	286.73	5044.24	486.20	2435.82	6.42
5	West Nimar (Khargone)	7757.16	359.87	2754.40	147.71	0.00	592.49	3494.60	172.28	3322.32	2265.16	171.59	2436.75	274.80	782.36	3.40
6	Barwani	5234.28	1393.21	9827.60	428.04	0.00	1537.31	11792.95	589.65	11203.30	8281.91	863.09	9145.00	1254.89	1666.51	21.73
iii)	MAHARASHTRA															
1	Washim	5017.05	1056.31	9452.59	595.09	353.72	2243.37	12644.76	632.49	12012.27	4247.42	340.11	4587.53	680.22	7084.62	8.04
2	Nashik	15021.09	5959.21	58668.70	4176.54	113.22	17334.00	80292.46	4341.05	75951.41	42193.69	1395.88	43589.58	2588.82	32699.87	22.77
3	Nandurbar	5684.20	4111.38	30807.73	1616.65	0.00	6102.63	38527.02	2161.82	36365.20	16205.96	2232.08	18438.05	4464.17	15695.07	36.67
4	Jalna	7510.09	123.51	992.20	45.24	11.39	420.44	1469.27	80.19	1389.09	719.85	22.38	742.23	44.76	624.48	0.88
5	Jalgaon	11349.74	11334.09	93280.75	4803.59	4644.56	44065.62	146794.53	7432.15	139362.38	101869.78	4875.17	106744.94	8659.10	32510.06	76.49
6	Dhule	6925.51	6864.04	49057.16	5572.90	0.00	19315.38	73945.44	4802.56	98682.88	34657.11	1770.76	36427.87	3489.10	31716.67	51.68
7	Buldhana	9409.67	5613.39	40701.41	3098.33	3306.59	12202.73	59309.05	2965.45	56343.60	38345.83	2127.28	40473.11	4		

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

(in Hm³)																
Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
				Recharge from Rainfall	Recharge From Other Sources	Recharge from Rainfall	Recharge From Other Sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
XII	Basin : West Flowing Rivers from Tapi to Tadri															
i)	DADRA & NAGAR HAVELI															
1	Dadra & Nagar Haveli	477.07	477.07	5417.70	219.90	966.61	441.48	7045.69	704.57	6341.12	750.46	1292.40	2042.86	1398.49	4192.18	32.22
ii)	DAMAN & DIU															
1	Daman	70.98	70.98	777.00	89.00	0.00	93.00	959.00	48.00	911.00	394.00	125.00	519.00	235.00	282.00	56.97
iii)	GOA															
1	North Goa	1650.18	1650.18	9394.65	51.19	0.00	5250.82	14696.66	5878.66	8818.00	1593.63	1817.61	3411.24	2196.51	5027.86	38.68
2	South Goa	1917.11	1917.11	5451.21	1009.50	644.26	2573.52	9678.08	3871.23	5806.85	554.04	1411.53	1965.57	1705.77	3547.04	33.85
iv)	GUJARAT															
1	Navsari	2146.71	2146.71	19739.97	7852.87	0.00	13215.06	40807.90	2040.40	38767.51	14753.60	2344.00	17097.60	3117.00	20896.91	44.10
2	Surat	4174.64	1351.44	20479.58	18198.71	0.00	15172.86	53851.15	2692.56	51158.59	14801.57	2044.98	16846.55	2682.39	33674.63	10.66
3	Tapi	3040.24	1354.13	10955.99	4730.20	0.00	5849.79	21535.98	1651.69	19884.29	8639.25	592.39	9231.63	798.61	8351.53	20.68
4	The Dangs	1700.82	1675.07	4554.20	2017.65	0.00	33.86	6605.71	330.29	6275.42	1419.68	573.19	1992.86	746.52	4109.22	31.28
5	Valsad	2894.91	2894.91	27838.00	7553.00	0.00	6108.00	41498.00	2075.00	39423.00	16341.00	2608.00	18949.00	3165.00	19917.00	48.07
v)	KARNATAKA															
1	Belgaum	13120.75	1007.02	2429.90	3638.22	838.55	1781.17	8687.84	771.57	7916.27	5787.20	527.63	6314.83	809.63	1662.04	6.12
2	Dharwad	4202.26	1422.24	5783.53	1294.77	2110.42	874.40	10063.12	1997.28	8065.84	4090.85	908.62	4999.48	1573.31	2401.67	20.98
3	Haveri	4743.98	120.36	416.26	597.26	234.31	171.46	1419.29	98.17	1321.13	807.77	76.34	884.11	122.18	391.61	1.70
4	Shimoga	8361.30	15.01	70.98	64.40	20.51	35.85	191.73	28.54	163.19	42.72	5.28	48.00	10.55	109.92	0.05
5	Uttar Kannada	10048.65	8350.89	58456.07	3044.78	4663.22	2789.25	68953.33	25309.98	43643.35	14299.52	2980.99	17280.51	9075.32	20268.51	32.91
vi)	MAHARASHTRA															
1	Ahmednagar	16510.41	12.14	70.29	10.75	18.69	38.82	138.55	7.30	131.25	98.18	3.55	101.73	6.43	32.06	0.06
2	Dhule	6925.51	53.52	382.51	43.45	0.00	150.61	576.56	31.83	544.73	270.23	13.81	284.03	27.21	247.30	0.40
3	Kolhapur	7500.31	262.87	2094.63	310.78	128.54	2087.72	4621.67	244.32	4377.34	1705.39	50.33	1755.72	100.66	2571.29	1.41
4	Mumbai	144.60	144.60													
5	Mumbai (Suburban)	438.28	438.28													
6	Nandurbar	5684.20	0.69	5.17	0.27	0.00	1.02	6.47	0.36	6.10	2.72	0.37	3.09	0.75	2.63	0.01
7	Nashik	15021.09	2088.62	20562.56	1463.82	39.68	6075.32	28141.39	1521.48	26619.91	14788.30	489.24	15277.54	907.35	11460.85	7.98
8	Pune	15185.75	313.94	2106.72	266.78	73.77	1349.64	3796.90	199.55	3597.35	2491.62	165.71	2657.33	298.61	914.45	1.53
9	Raigarh	6942.67	6940.14	36125.94	352.27	0.00	5441.75	41919.96	2132.52	39787.43	4193.62	2093.32	6286.93	4186.64	31407.18	15.79
10	Ratnagiri	8050.94	8036.44	46584.94	134.45	0.00	1840.56	48559.95	2431.65	46128.30	4186.63	1246.26	5432.89	2492.52	39449.15	11.76
11	Sangli	8349.99	3.80	25.80	4.97	1.12	13.92	45.81	2.38	43.42	32.38	1.29	33.67	2.32	9.53	0.04
12	Satara	10223.37	36.06	209.02	30.89	37.19	91.73	368.83	18.75	350.08	253.33	17.89	271.22	34.64	62.64	0.27
13	Sindhudurg	4966.78	4842.13	24542.08	139.33	203.49	1887.86	26772.76	1338.64	25434.12	6202.32	1914.03	8116.35	3828.07	15403.74	31.11
14	Thane	9208.22	9202.56	36656.86	483.84	0.00	6122.59	43263.30	2189.70	41073.60	7466.51	1515.08	8981.60	3030.17	30576.92	21.86
XIII	Basin : West Flowing Rivers from Tadri to Kanyakumari															
i)	KARNATAKA															
1	Chikmagalur	7167.73	152.22	753.25	266.45	273.15	138.63	1431.48	257.06	1174.43	476.88	52.20	529.08	74.11	626.50	0.96
2	Dakshin Kannada	4578.68	4577.59	40472.48	1721.66	7172.34	3514.41	52880.90	19894.24	32986.65	19797.60	3272.94	23070.54	4213.95	8975.10	69.92
3	Hassan	6789.18	462.78	1410.06	1960.12	890.87	1271.12	5532.17	572.00	4960.17	2628.42	192.64	2821.05	266.87	2083.08	3.88
4	Kodagu	4115.60	1216.92	5462.85	466.25	2707.29	365.38	9001.78	1425.36	7576.42	1644.01	423.94	2067.95	558.55	5373.87	8.07
5	Shimoga	8361.30	2652.20	12541.65	11378.87	3623.75	6333.89	33878.16	5043.64	28834.52	7548.24	933.57	8481.82	1864.16	19422.11	9.33
6	Udupi	3841.79	3838.73	46739.80	972.68	5990.70	1768.92	55472.10	21737.92	33734.18	9830.85	2720.00	12550.85	3871.29	20032.03	37.18
7	Uttar Kannada	10048.65	1033.70	7235.88	376.89	577.23	345.26	8535.27	3132.95	5402.31	1770.04	369.00	2139.04	1123.37	2508.90	4.07
ii)	KERALA															
1	Alappuzha	1454.48	1454.48	28700.00	67.00	7091.00	10869.00	46727.00	3566.00	43161.00	3893.00	9855.00	13748.00	9453.00	29815.00	31.85
2	Ernakulam	2454.58	2454.57	38787.84	304.00	7263.97	13501.94	59857.76	5985.98	53871.78	7699.97	12177.95	19877.92	13637.94	32532.87	36.90
3	Idukki	5106.26	4682.42	15632.95	173.31	3004.08	1611.16	20421.50	2042.15	18379.35	5058.15	4252.11	9310.26	3710.17	9611.04	46.45
4	Kannur	2957.80	2956.64	45263.24	0.00	0.00	6828.32	52091.56	5208.96	46882.61	8008.86	10562.86	18571.71	10994.69	27878.06	39.59
5	Kasargod	1964.67	1964.67	31746.00	770.00	0.00	4643.00	37158.00	3716.00	33442.00	16397.00	6561.00	22958.00	7180.00	9865.00	68.65
6	Kollam	2556.16	2544.48	27253.90	137.37	8908.11	3862.27	40161.64	3873.22	36288.42	4972.18	11230.45	16202.62	12834.09	18482.16	44.45
7	Kottayam	2258.83	2258.83	31597.00	105.00	6607.00	6994.00	45304.00	4530.00	40774.00	4850.00	8282.00	13132.00	9155.00	26769.00	32.21
8	Kozhikode	2347.84	2343.42	35326.37	147.72	0.00	1283.58	36757.67	3676.07	33081.60	4402.70	13403.72	17805.42	14562.53	14117.37	53.68
9	Malappuram	3599.11	3597.21	42078.77	329.83	6397.62	8547.49	57352.71	5692.99	51659.71	9554.95	20643.10	30198.05	23873.39	18231.37	58.43
10	Palakkad	4542.91	3923.85	28911.65	773.04	5241.12	26285.91	61212.58	6121.26	55091.32	18879.42	11596.45	30476.73	12188.97	24097.22	47.78
11	Pathanamthitta	2709.55	2704.62	20163.25	120.78	6332.46	3501.62	30119.10	2895.72	27223.38	3640.36	5634.73	9275.09	5423.11	18159.90	34.01
12	Thiruvananthapuram	2246.81	2242.48	22453.64	239.54	6590.27	3044.12	32326.58	2759.67	29566.91	5280.80	12538.79	17819.59	12863.16	11422.94	60.15
13	Thrissur	3071.57	3071.56	46380.85	875.00	0.00	17003.94	64260.79	6085.98	58174.81	20469.93	12336.96	32807.89	12937.96	24765.92	56.40
14	Wayanad	2141.18	205.04	2925.76	2.87	0.00	60.71	2989.35	298.96	2690.48	150.92	373.27	524.19	361.69	2177.88	1.87
iii)	TAMIL NADU															
1	Coimbatore	4708.71	2139.34	10838.15	4506.32	2766.22	4581.33	22692.02	2269.20	20422.81	17162.65	2331.33	19493.98	2587.78	672.39	43.37
2	Kanniyakumari	1746.80	1675.98	61219.24	13349.10	3057.04	2916.03	25541.40	2554.14	22987.26	3063.54	1016.96	4080.49	1437.94	18485.79	17.03
3	The Nilgiris	2572.79	359.39	1604.91	28.85	379.79	13.96	2027.51	202.75	1824.76	84.09	74.51	158.60	83.74	1656.92	1.21
4	Theni	2909.55	1.95	8.09	9.79	5.59	5.33	28.81	2.88	25.93	19.66	0.51	20.17	0.60	5.66	0.05
5	Thirunelveli	6998.99	16.96	66.82	137.80	22.21	17.76	244.58	24.46	220.12	138.07	4.87	142.95	5.79	76.26	0.16
6	Tiruppur	5266.55	283.22	1113.31	758.65	275.06	564.27	2711.30	271.13	2440.17	2560.83	178.52	2739.34	193.25	-313.91	6.04
7	Virudhunagar	4487.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
iv)	PUDUCHERRY															
1	Mahe	9.90	9.90	244.73	0.00	27.50	0.00	272.23	27.22	245.01	0.00	167.78	167.78	209.44	35.57	68.00

Table 17 : GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT (2013)

(in Ham.)

(in Hm.)																
Sl. No.	Basin/State/District Name	Total Area (In Sq. Km.)	District Area in Basin (In Sq. Km.)	Annual Replenishable Ground Water Resource					Natural Discharge During Non-Monsoon Period	Net Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for Future Irrigation use	Stage of Ground Water Development (%)
				Monsoon Season		Non-Monsoon Season		Total			Irrigation	Domestic & Industrial Water Supply	Total			
1	2	3	4	5	6	7	8		9	10				11	12	13
XIV	Basin : Mahi															
i)	GUJARAT															
1	Anand	2806.43	996.53	11348.22	8467.72	0.00	9474.41	29290.35	1696.99	27593.36	13206.15	2006.96	15213.11	2441.23	11945.98	19.58
	Bharuch	5083.67	2199.42	14797.26	1125.83	0.00	4271.35	20194.44	1009.72	19184.71	7944.08	991.62	8935.70	1288.41	9952.22	20.15
	Dohad	3458.35	3397.99	22059.33	6686.31	0.00	9379.33	38124.97	1906.25	36218.72	13107.76	4491.22	17598.98	5450.19	17660.77	47.74
4	Kheda	3843.53	518.13	5964.51	2116.43	0.00	2391.64	10472.57	542.18	9930.40	5010.47	873.86	5884.34	1059.84	3860.08	7.99
5	Panch Mahals	5095.62	4889.39	33495.30	17572.66	0.00	31676.66	82744.63	4137.23	78607.40	23651.41	5541.27	29192.68	6723.41	48232.58	35.63
6	Sabar Kantha	7140.29	26.43	384.71	62.97	0.00	66.87	514.55	25.73	488.83	326.90	21.46	348.36	28.64	133.29	0.26
7	Vadodara	7234.95	3446.45	44653.96	5657.08	0.00	10686.22	60997.26	3049.86	57947.39	30770.84	3988.29	34759.13	5033.23	22143.32	28.57
ii)	MADHYA PRADESH															
1	Alirajpur	3217.78	216.75	1292.76	55.44	0.00	97.59	1445.79	72.29	1373.50	319.98	149.12	469.10	392.31	661.22	2.30
	Dhar	7842.30	1505.16	16220.00	895.33	0.00	3911.07	21026.40	1052.06	19974.34	15224.16	1024.34	16248.51	2040.66	2709.51	15.61
3	Jhabua	3302.18	3294.25	21792.07	785.80	0.00	2178.81	24756.68	1237.33	23519.34	8979.03	2536.19	11515.22	5675.78	8864.54	48.84
4	Neemuch	4001.43	29.18	232.30	27.41	0.00	55.50	315.21	15.76	299.45	237.56	11.99	249.55	14.39	47.50	0.61
5	Ratlam	4639.98	1820.86	22627.30	1944.71	0.00	7297.48	31869.49	1593.47	30276.02	37538.49	1017.54	38556.02	1282.66	-8545.12	49.98
iii)	RAJASTHAN															
1	Banswara	4332.72	4332.72	10629.26	1569.69	0.00	15633.94	27832.89	4174.92	23657.97	9537.99	1932.88	11470.87	2424.15	11695.83	48.49
	Chittaurgarh	7500.49	133.03	460.92	35.23	0.00	179.12	675.26	65.40	609.86	796.75	26.56	823.31	89.32	0.00	2.39
3	Dungarpur	3640.43	3042.56	6743.76	1076.48	0.00	4446.60	12266.84	1123.72	11143.12	7250.88	755.78	8006.66	2988.12	1368.29	60.05
	Pratapgarh	4141.45	2993.52	8226.55	794.52	0.00	3367.03	12388.10	1145.93	11242.17	12566.76	439.97	13006.73	2041.42	615.61	83.63
5	Udaipur	11459.12	5494.69	10262.16	743.46	0.00	4387.67	15393.29	1794.18	13599.11	11576.82	1500.77	13077.58	3758.96	447.06	46.11
XV)	Basin: Sabarmati															
i)	GUJARAT															
1	Ahmedabad	7712.66	4718.07	24058.00	5501.50	0.00	6122.68	35682.17	1878.92	33803.25	21453.02	4539.04	25992.07	5870.78	6479.45	47.04
	Anand	2806.43	1785.66	20334.62	15173.12	0.00	16976.98	52484.72	3040.79	49443.93	23663.81	3596.22	27260.04	4374.39	21405.73	35.08
	Banaskantha	10247.55	506.28	4372.36	687.85	0.00	890.03	5950.24	304.58	5645.66	6581.59	290.01	6871.59	377.36	327.20	6.01
	Bhavnagar	8062.74	213.25	2163.58	463.62	0.00	372.71	2999.91	150.00	2849.91	1712.17	164.87	1877.04	199.98	937.76	1.74
5	Gandhinagar	2055.07	2055.07	35503.58	5245.20	0.00	2845.75	43594.52	2179.73	41414.79	57054.00	3112.00	60166.00	3753.00	0.00	145.28
	Kheda	3843.53	3325.40	38280.69	13583.41	0.00	15349.73	67213.83	3479.75	63734.08	32157.63	5608.54	37766.16	6802.16	24774.29	51.27
7	Mahesana	4244.35	2087.36	37604.49	5223.49	0.00	6389.50	49217.48	2460.87	46756.60	54383.44	2447.18	56830.62	3184.88	96.40	59.78
8	Panchmahals	5095.62	68.67	470.43	246.80	0.00	444.89	1162.12	58.11	1104.02	332.18	77.83	410.00	94.43	677.41	0.50
9	Rajkot	10762.12	261.22	2817.56	493.91	0.00	612.97	3924.44	196.22	3728.21	2318.26	195.29	2513.56	252.82	1157.13	1.64
10	Sabarkantha	7140.29	7113.86	103548.30	16949.51	0.00	17999.02	138496.83	6924.84	131571.99	87987.30	5776.54	93763.84	7709.36	35875.33	71.00
11	Surendranagar	10116.24	4603.36	31067.82	1935.77	0.00	3130.93	36134.52	1806.73	34327.80	19197.50	1390.17	20587.67	1791.06	13339.23	27.29
ii)	RAJASTHAN															
1	Dungarpur	3640.43	597.87	1325.16	211.53	0.00	873.77	2410.46	220.81	2189.65	1424.82	148.51	1573.33	587.17	268.87	11.80
	Sirohi	4961.34	54.66	287.92	9.94	0.00	36.70	334.56	31.39	303.17	337.68	12.21	349.90	15.55	12.82	1.27
3	Udaipur	11459.12	3289.85	6144.29	445.13	0.00	2627.04	9216.46	1074.24	8142.23	6931.42	898.56	7829.98	2250.61	267.67	27.61
XVI)	Basin : WFR of Kutch, Saurashtra Including Luni															
i)	GUJARAT															
1	Ahmedabad	7712.66	2994.60	15269.82	3491.85	0.00	3886.12	22647.79	1192.57	21455.22	13616.42	2880.97	16497.39	3726.23	4112.56	29.85
	Amreli	7100.01	7100.01	76488.80	10666.14	0.00	12631.17	99786.11	4989.31	94796.80	59553.35	2637.00	62190.35	3532.00	31711.45	65.60
3	Anand	2806.43	24.24	276.04	205.97	0.00	230.46	712.47	41.28	671.19	321.23	48.82	370.05	59.38	290.58	0.48
	Banas Kantha	10247.55	9741.27	84128.07	13234.78	0.00	17125.01	114487.86	5860.39	108627.47	126635.49	5579.99	132215.49	7260.64	6295.63	115.70
5	Bhavnagar	8062.74	7849.49	79638.77	17065.25	0.00	13719.08	110423.09	5521.15	104901.94	63023.13	6068.63	69091.76	7361.02	34517.79	64.12
6	Jamnagar	10490.91	10490.91	80505.45	11681.29	0.00	7646.04	99832.78	4991.64	94841.14	57756.50	4500.00	62256.50	6033.00	31051.64	65.64
7	Junagadh	8497.29	8497.29	115401.36	13671.87	0.00	16840.77	145914.00	7295.70	138618.30	84908.60	689.00	91777.60	9203.00	44506.70	66.21
8	Kachchh	40508.20	40508.20	59875.02	13036.63	0.00	13821.69	86733.34	4336.67	82396.68	63559.80	4529.00	68088.80	5694.00	14989.28	82.64
9	Mahesana	4244.35	2156.99	38858.90	5397.73	0.00	6602.64	50859.27	2542.96	48316.31	56197.56	2528.82	58726.38	3291.12	99.62	61.77
10	Patan	5431.61	5431.61	13641.37	7474.20	0.00	7257.54	28373.11	1418.66	26954.46	26758.50	1915.00	28673.50	2495.00	0.00	106.38
11	Porbandar	2203.38	2203.38	17295.56	2149.96	0.00	1409.84	20855.36	1042.77	19812.59	13710.30	835.00	14545.30	1618.00	4484.29	73.41
12	Rajkot	10762.12	10500.90	113264.31	19854.94	0.00	24640.88	157760.12	7888.01	149872.12	93192.84	7850.71	101043.54	10163.18	46516.10	65.78
13	Surendranagar	10116.24	5512.88	37206.12	2318.24	0.00	3749.53	43273.89	2163.69	41110.19	22990.50	1664.83	24655.33	2144.94	15974.76	32.68
ii)	RAJASTHAN															
1	Ajmer	8206.23	1870.76	6225.59	345.77	0.00	1492.71	8064.08	754.01	7310.06	9665.93	1080.60	10746.53	1089.85	0.00	33.51
	Barmer	27351.28	20773.88	19534.49	477.31	0.00	1103.80	21115.60	1973.05	19142.55	18495.13	5213.05	23708.18	4959.47	1641.12	94.07
3	Bhilwara	10052.59	2.23	7.38	0.53	0.00	2.65	10.56	1.02	9.55	12.45	0.92	13.37	0.64	0.00	0.03
	Chittaurgarh	7500.49	36.42	126.19	9.64	0.00	49.04	184.87	17.91	166.96	218.13	7.27	225.40	24.45	0.00	0.66
5	Jaisalmer	37070.06	2021.38	378.92	0.83	0.00	2.85	382.61	35.69	346.91	684.80	178.48	863.29	139.65	130.51	13.57
6	Jalor	10322.33	10322.33	41074.54	1131.80	0.00	4474.38	46680.72	4036.01	42644.71	78962.16	4196.76	83158.92	4288.38	1150.76	195.00
7	Jodhpur	22037.60	13324.02	23845.06	422.50	964.87	1303.67	26536.11	2622.64	23913.47	47116.74	7756.40	54873.15	7976.36	3089.02	138.74
8	Nagaur	17026.59	6096.23	18145.60	182.86	1477.29	788.94	20594.70	2006.77	18587.93	29479.81	6907.79	36387.60	7013.54	1481.50	70.09
9	Pali	11890.23	11890.23	27194.32	841.59	0.00	4627.35	32663.26	3201.41	29461.85	31490.91	3393.70	34884.61	3550.27	1392.72	118.41
10	Rajsamand	4485.42	364.89	695.12	77.41	0.00	238.68	1011.20	101.12	910.08	838.76	125.90	964.66	296.25	5.66	8.62
11	Sikar	7428.38	2.75	9.89	0.20	1.48	0.60	12.17	1.17	11.00	14.08	2.56	16.64	3.46	0.32	0.06
12	Sirohi	4961.34	4906.68	25845.84	892.64	0.00	3294.07	30032.55	2817.42	27215.12	30312.99	1096.27	31409.25	1396.33	1150.66	114.14
13	Udaipur	11459.12	205.67	384.12	27.83	0.00	164.23	576.18	67.16							

Glossary of Terms

Glossary of Terms

Active (usable) storage capacity	The total amount of reservoir capacity normally available for release from a reservoir below the maximum storage level. It is total or reservoir capacity minus inactive storage capacity. More specifically, it is the volume of water between the outlet works and the spillway crest.
Alluvium	Sediments deposited by erosion processes, usually by streams.
Area Sown more than once	This represents the areas on which crops are cultivated more than once during the agricultural year. This is obtained by deducting 'Net Area Sown' from 'Total Cropped Area'.
Area under Non-agricultural Uses	This includes all lands occupied by buildings, roads and railways or under water, e.g. rivers and canals and other lands put to uses for other than agricultural purposes.
Barren and Unculturable Land:	This includes all barren and unculturable land like mountains, deserts, etc. land whether such land is in isolated blocks or within cultivated holdings which cannot be brought under cultivation, except at an exorbitant cost, is classified as unculturable land
Basin boundary	The topographic dividing line around the perimeter of a basin, beyond which overland flow (i.e., runoff) drains away into another basin.
Bed load	Sand, silt, gravel, or soil and rock detritus carried by a stream on or immediately above its bed. The particles of this material have a density or grain size such as to preclude movement far above or for a long distance out of contact with the stream bed under natural conditions of flow.
Bed material	The sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.
Biochemical Oxygen Demand (B.O.D.)	The measure of oxygen required for natural oxidation of organic matter with the aid of bacteria. The test is made by taking duplicate samples of water in two completely filled bottles, one of which is sealed and kept stored for 5 days. The dissolved oxygen content of the first sample gives the biochemical oxygen demand, or shortly B.O.D. value. The B.O.D. value of surface waters may be 1 to 10 p.p.m., and for deep well water it would be much less.

Coliform Group	All waters contain bacteria, vast majority of which are perfectly harmless. One organism, bacillus Coli, found in the intestines of men and warm-blooded animals, which in itself is usually quite and may therefore be regarded as danger signal. The group of bacteria of intestinal origin is known as coliform group. The bacilli of this group ferment lactose with gas formation. Since organisms of the coliform group normally live longer in water than other bacteria, absence of such organisms indicates that the water is safe. Also this group is more resistant to treatment than pathogens, their existence or otherwise gives a useful indication of the efficiency of water treatment methods.
Coliform Index	The probable number of coliform organisms present in 100 ml. is known as coliform index. If out of 5 portions be isolated from one sample only, the number of coliforms would be considered to be 1 in 50 ml. or 2 in 100 ml., which would be the coliform index, assuming that the gas formation was due to one coliform only.
Culturable Waste Land	This includes land available for cultivation, whether not taken up for cultivation or taken up for cultivation once but not cultivated during the last five years or more in succession including the current year for one reason or the other. Such lands may be either fallow or covered with shrubs and jungles which are not put to any use. They may be assessed or unassessed and may lie in isolated blocks or within cultivated holdings.
Current Fallows	This represents cropped area, which are kept fallow during the current year. For example, if any seeding area is not cropped against the same year it may be treated as current fallow.
dam	Any artificial barrier which impounds or diverts water. A dam is generally considered hydrologically significant if it is (i) One and one quarter feet (0.4 meters) or more in height from the natural bed of the stream and has a storage of at least 15 acre-feet, or (ii) has an impounding capacity of 50 acre-feet or more and is at least six feet (2 meters) above the natural bed of the stream.
Discharge	The quantity of water flowing across a section of a channel in a unit time is called the discharge. It is measured in cubic feet or meters per second, briefly called cusecs and cumecs respectively and is equal to the area of section \times average velocity. Common units are cubic feet per second (cfs), second-day feet (sdf), and cubic meter per second (cumecs). Two types of discharges are often measured and recorded: (i) instantaneous discharge: the discharge at a particular instant of time. (ii) mean discharge: the arithmetic mean of individual discharges during a period of time. Discharges given are daily observed discharges commencing at 08.00 hrs.
Drainage area	An area around a river and rainfall of which flows into the river. Also known as watershed, catchment area and drainage basin.

Drainage basin	A part of the earth's surface which is occupied by a drainage system which consists of a surface stream with all its tributaries and impounded bodies of water. Also known as watershed, catchment area, and drainage area.
Fallow Land	This includes fallow land other than current fallows and current fallow land of land use classification which are explained below.
Fallow Lands other than Current Fallows	This includes all lands, which were taken up for cultivation but are temporarily out of cultivation for a period of not less than one year and not more than five years.
Forest	This includes all lands classified as forest under any legal enactment dealing with forests or administered as forests, whether state-owned or private, and whether wooded or maintained as potential forest land. The area of crops rose in the forest and grazing lands or areas open for grazing within the forests remains included under the forest area.
Gross capacity	The maximum volume of water that can be stored in a reservoir.
Gross reservoir capacity	The total amount of storage capacity available in a reservoir for all purposes from the streambed to the normal water or normal water or normal pool surface level. It does not include surcharge, but does include dead storage.
Ground water	Water within the earth that supplies wells and springs; water in the zone of saturation where all openings in rocks and soil are filled, the upper surface of which forms the water table. Also termed Phreatic water.
Ground water runoff	That part of the runoff which has passed into the ground, has become ground water, and has been discharged into a stream channel as spring, or seepage water.
Hardness	Hardness of water is generally caused by the presence of salts of calcium and magnesium. Hardness due to the presence of bicarbonates of calcium and magnesium is called temporary hardness. Permanent hardness is caused by the presence of sulphates and chlorides of these metals, and is not removable by boiling. The sum of these two hardness is called total hardness. It is expressed in terms of calcium carbonate. Since one gallon of water weighs 70,000 grains, degrees of hardness can be converted in p.p.m. by multiplying by 14.3. A water having 50 to 100 p.p.m. hardness is called soft water, one with 100 to 200 p.p.m. Moderately hard, and that with 200 to 300 p.p.m. hard. Hardness of 80 to 90 p.p.m. is considered to be the best.
Headwater basin	A basin at the headwaters of a river. All discharge of the river at this point is developed within the basin.



Hydrogen-ion Concentration (pH)	<p>Acidity and Alkalinity determinations is the measures of acid and alkali present, while the H-ion concentration determines the strength of the acid and alkali in water. An ion is an atom or a group of atoms that carries an electric charge.</p> <p>The H-ion concentration is expressed in terms of logarithm of the reciprocal of the H-ion concentration. This term is called the pH value (potential of Hydrogen). $\text{Log } 1/10^{-7} = 7$, so that pH value 7 denotes neutrality while values above 7, signify alkalinity and those below 7, acidity. The determination of pH value provides information concerning the corrosive character of water. Waters with pH between 7.4 and 8.4 are practically inactive.</p> <p>Waters with pH above 8.6 or 8.8 are likely to cause precipitation of calcium carbonate in the distribution system, while waters over-carbonate with CO₂ may dissolve the slight carbonate film on the inside of mains and start active corrosion, depending upon the pH value. When the pH of natural waters is below 7 it may be found necessary to add a small amount of soda ash or lime to the water before admittance to the mains, as otherwise corrosion may be caused.</p>
Hydrologic Cycle	Water is lost to the atmosphere as vapour from the earth, which is then precipitated back in the form of rain, snow, hail, dew, frost, etc. The process of evaporation and precipitation which combines forever and thereby maintaining a balance between the two is called Hydrologic Cycle.
Hydrologic unit	A geographical area representing part or all of a surface drainage basin or distinct hydrologic feature such as a reservoir, lake, etc.
Inactive storage Capacity	The portion of capacity below which the reservoir is not normally drawn, and which is provided for sedimentation, recreation, fish and wildlife, aesthetic reasons, or for the creation of a minimum controlled operational or power head in compliance with operating agreements or restrictions.
Inches of runoff	the volume of water from runoff of a given depth over the entire drainage.
Irrigated area	The gross farm area upon which water is artificially applied for the production of crops, with no reduction for access roads, canals, or farm buildings.
Irrigation efficiency	The percentage of water applied that can be accounted for in soil moisture increase for conjunctive use.
Irrigation requirement	The quantity of water, exclusive of precipitation, that is required for crop production. It includes surface evaporation and other economically unavoidable wastes.

Land under Miscellaneous Tree Crops, etc	This includes all cultivable land which is not included in 'Net area sown' but is put to some agricultural use. Lands under Casuarinas trees, thatching grasses, bamboo bushes and other groves for fuel, etc. which are not included under 'Orchards' are classified under this category.
Live capacity	The minimum volume of water required for maintaining flow of water from the Reservoir. It is the total amount of storage capacity available in a reservoir for all purposes, from the dead storage level to the normal water or normal pool level surface level. Does not include surcharge, or dead storage, but does include inactive storage, active conservation storage and exclusive flood control storage.
Long term storage dams	Reservoirs used for recreational use or storage of irrigation, municipal or industrial water. Because water is impounded on a "permanent" basis, the design of these dams is more complex than for tailings or flood control detention dams. A long term storage dam may include an impermeable core surrounded by shell material; have many types of drains and filters, outlet works, with gates and valves, seepage collection boxes, and possibly several spillways. The capacity of the spillway is dependent upon the downstream hazard potential.
Mean annual rainfall	Mean annual rainfall is usually worked out as a simple average of the total rainfall of various years.
Mean depth	The average depth of water in a stream channel or conduit. It is equal to the cross-sectional area divided by the surface width.
Moisture equivalent	The ratio of (1) the weight of water which the soil, after saturation, will retain against a centrifugal force 1,000 times the force of gravity, to (2) the weight of the soil when dry. The ratio is stated as a percentage.
Net Area Sown	This represents the total area sown with crops and orchards but area sown more than once in the same year is counted only once.
Net rainfall	The portion of rainfall which reaches a stream channel or the concentration point as direct surface flow.
Normal year	The year during which the precipitation or stream flow approximates the average for a long period of record.
Not available for cultivation	This includes area under non-agricultural uses and barren & unculturable land which are briefly described below.
Other Cultivated land excluding fellow land	This includes (i) permanent pastures and other grazing land (ii) land under miscellaneous trees, crops and groves not included in net area and (iii) culturable waste land which are briefly described below.
Peak discharge	Rate of discharge of a volume of water passing a given location. (Usually in cubic feet per second.)

Permanent Pastures and other Grazing Lands	This includes all grazing lands whether they are permanent pastures and meadows or not. Village common grazing land is included under this head.
Point discharge	Instantaneous rate of discharge, in contrast to the mean rate for an interval of time.
Point precipitation	Precipitation at a particular site, in contrast to the mean precipitation over an area.
Reporting Area for Land Utilisation Statistics	The Reporting area stands for the area for which data on land use classification of area are available. In areas where land utilization figures are based on land records, reporting area is the area according to village papers, i.e. the papers prepared by the village accountants. In some cases, the village papers may not be maintained in respect of the entire area of the State. For example, village papers are not prepared for forest areas for which no village paper exists for which ad-hoc estimates of classification of area etc. framed to complete the coverage.
River Basin	Drainage area of a river and its tributaries.
River gauge datum	The arbitrary zero datum elevation which all stage measurements are made from.
Runoff	Water which is not absorbed by the soil and flows to lower ground, eventually draining into a stream, river, or other body of water. It is that part of precipitation that flows toward the streams on the surface of the ground or within the ground. Runoff is composed of base flow and surface runoff.
Runoff/ potential	Runoff/ potential of a river for a specified period at a site is the total volume of water flow/passed from/through the site during the specified period. It is the notional depth of water in mm over the catchment, equivalent to annual runoff (in M.Cum.)/Catchment Area (km ²)* 1000 and calculated at the discharge measurement station.
Second-day feet	The volume of water represented by a flow of one cubic foot per second for 24 hours; equal to 84,000 cubic feet. This is used extensively as a unit of runoff volume. Often abbreviated as SDF.
Sediment storage capacity	The volume of a reservoir planned for the deposition of sediment.
Soil moisture	Water contained in the upper regions near the earth's surface.
Stage	The level of the water surface above an established "zero" plane or datum at a given location.
Surface runoff	The runoff that travels overland to the stream channel. Rain that falls on the stream channel is often lumped with this quantity.

Surface water	Water that flows in streams and rivers and in natural lakes, in wetlands, and in reservoirs constructed by humans.
Temperature	The in-situ temperature in degree centigrade by thermometer is recorded in terms of water intended use, the treatment to remove impurities and its transport.
Total Cropped Area	This represents the total area covered with crops, i.e. the sum total of areas covered by all the individual crops; areas sown with crops more than once during the year being counted as separate areas for each crop. It is also known as Gross Cropped Area.
Tributary	A stream or river whose water flows into a larger stream or river.
Watershed	The sum total of all the land and smaller bodies of water which drains into a particular stream or river.
Zero R.L. of gauge	The Zero R.L. of a gauge is the datum level fixed for a given site, which is kept 1 or 2 m lower than the lowest water level recorded in a perennial stream. In a no perennial stream, it is kept 1 or 2 m lower than the lowest bed level of the stream.

ABBREVIATIONS AND SYMBOLS

-	:	Anion
+	:	Cation
⁰ C	:	Degree Centigrade
BCM	:	Billion Cubic Meter
BOD	:	Bio-Chemical Oxygen Demand
cumec	:	Cubic Meter per Second
CWC	:	Central Water Commission
DO	:	Dissolved Oxygen
G	:	Gauge Sites
GD	:	Gauge & Discharge sites
GDQ	:	Gauge, Discharge and Water Quality Sites
GDS	:	Gauge, Discharge & Sediment sites
GDSQ	:	Gauge, Discharge, Sediment and Water Quality Sites
GSC	:	Gross Storage capacity
IC	:	Installed Capacity (Mega Watt)
LSC	:	Live Storage capacity
m	:	Meter
max	:	Maximum
MCM	:	Million Cubic Meter
mg/l	:	Milligram per Litre
min	:	Minimum
mm	:	Millimeters
MPN	:	Most Probable Number
N.A.	:	Not Applicable
pH	:	Negative logarithm of hydrogen ion concentration
ppm	:	Part per million
PSS	:	Pumped Storage Schemes
RSC	:	Residual Sodium Carbonate
SAR	:	Sodium Absorption Ratio
Sq Km	:	Square Kilometers
WQ	:	Water Quality
	:	Under Construction Structures (In the River Flow Line Diagram)
	:	Operational Structures (In the River Flow Line Diagram)

ABBREVIATIONS AND SYMBOLS

pH_Gen	:	Negative logarithm of hydrogen ion concentration - General
B	:	Boron
Ca	:	Calcium
Cl	:	Chloride
CO ₃	:	Carbonate
F	:	Fluoride
Fe	:	Iron
HCO ₃	:	Bicarbonate
K	:	Potassium
Mg	:	Magnesium
Na	:	Sodium
NH ₃ -N	:	Ammonia Nitrogen
NO ₂ -N	:	Nitrite Nitrogen
NO ₃ -N	:	Nitrate Nitrogen
SiO ₂	:	Silica
SO ₄	:	Sulphate
As	:	Arsenic
Cd	:	Cadmium
Cr	:	Chromium
Cu	:	Copper
Hg	:	Mercury
Ni	:	Nickel
Pb	:	Lead
Zn	:	Zinc
%	:	Percentage